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SMOKING :

WHEN INJURIOUS, WHEN INNOCUOUS, WHEN BENEFICIAL.

WITH COMPENDIUM OF THE TEMPERAMENTS,

SHEWING HOW THEY ARE INFLUENCED BY

TOBACCO.

BY

JOHN C. MURRAY, M.D., F.A.I.,

NEWCASTLE-UPON-TYNE.

"WHAT CHARMS THE TURK, GREEK, FRENCHMAN, FOP, OR SAGE,
IN THIS ENLIGHTEN'D COMFORT-LOVING AGE,
SINCE HEALTH AND PLEASURE'S CHEERFUL REIGN BEGAN,
BUT LOV'D TOBACCO, SOVEREIGN FRIEND OF MAN."

H. J. Mellor.

LONDON: SIMPKIN, MARSHALL & CO.

NEWCASTLE-UPON-TYNE: D. H. WILSON, AND ALL BOOKSELLERS.

1871.

ONE SHILLING.



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“Weed of the savage, weed of each pole,
Comforting,—soothing,—philosophy's soul;
Still thou art welcome, the purest, the best,
Joy of earth's millions, for ever caresst!”

SECOND THOUSAND.

LONDON: SIMPKIN, MARSHALL & Co.
NEWCASTLE-UPON-TYNE: D. H. WILSON.

1871.

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PREFACE TO THE FIRST EDITION.

MAN exists by bread; he lives with tobacco. Bread is the staff; tobacco the charm of life—bread represents necessity; tobacco, enjoyment. The one, toil; the other, relaxation: the former, the straight line; the latter, the curve of beauty—the wave of grace—the ellipse—the circle.

In the fifteenth century, Europe became acquainted with the art of printing, and with tobacco. During the years which have since rolled into the lap of ages, literature and tobacco have preserved so close an affinity, that they may not now be sundered. Raleigh, Milton, Dryden, Newton, Prior, Steel, Addison, Swift, Congreve, Bolingbroke, Pope, Johnson, Byron, Burns, Scott, Campbell, Moore, and Dickens, spoke, wrote, or sung, under inspiration from the “weed of

iv.

strange power." Tobacco plays, however, a higher *role* than that of prompting merely. Since the Creator discovered it to man, it seems to have been specially entrusted to his use, for the purpose of long preserving unto us our most giant minds, by virtue of its power to lull them into an occasional and calm repose. But for tobacco, their genius would often be that only of the meteor's flash; a too incessant mental strain, without relief, being apt to hurl reason from its throne, and shroud it in a night of chaos.

From man's immortal part, and particular stars, let us come to the body, and its sufferings. During the Franco-German war, every newspaper correspondent, and medical officer, testified to the utility of tobacco, not only in relieving the fatigues, exposures, and privations of the combatants, and frequently snatching the wounded from death, but also, the unmistakeable advantages which accrued to the victims, from its employment, in their subsequent treatment. Its curative properties were so obvious, that a surgeon of my acquaintance, from being strongly opposed to tobacco, became a convert, in so far that

he actually purchased cigars, and presented them to the wounded, in consequence of his observing that their smoking assisted recovery. This experience is contrary to what has been enunciated as theory, or deduced from isolated examples taken from the hospitals. Practical observation, upon previously healthy men must, however, be allowed precedence of speculation, especially when inferred from disease.

Coming to still more ordinary mortals than warriors, the artisan will often lack his dinner rather than his pipe, and the penniless beg to procure tobacco; the passion for it may, therefore, be regarded rather as an instinct—a dictate of nature—than as an adventitious appetite. If it only “rub out one wrinkle from the brow of care, or beguile the heavy heart of one moment of sorrow,” tobacco is a blessing, and its use beneficial.

If alcohol be condemned as a *stimulant*, how can we also condemn tobacco—man’s cherished *sedative*?

PREFACE TO THE SECOND EDITION.

ANOTHER issue of *Smoking* being required, I have, so far as time permitted, carefully revised and enlarged the work.

I gladly avail myself of the opportunity thus presented, to thank my readers for their many kind expressions of approval; correspondents for their confirmatory and useful testimonies; and reviewers for their favourable critiques.

J. C. M.

November, 1871.

CONTENTS.

	PAGE.
CHAPTER I. INTRODUCTORY. 	1—10
CHAPTER II. Argument for commencing with the digestive process—mastication—conversion of starch into sugar—food decomposes when not well chewed—buccal and gastric digestion—gastric juice, chyme—duodenal digestion—pancreatic and intestinal salivas—bile—chyle—mixture of the nutrient part of food with the blood—digestion is completed in the lungs—digestive process—saliva, its solvent power; its waste produces bad digestion and induces consumption—smoking after 28 assists digestion—theories of digestion—influence of the emotions—youth and age—smoking, and the pulse—smoking wards off gout, kidney, and liver diseases, apoplexy, inflammation, and congestion—Drs. Brinton and Smith—necessity for air and exercise 	11—24
CHAPTER III. Chemical principles in tobacco—pleasures of snuff-taking, chewing, and smoking, contrasted—smoking, a distillation—smoke—oil—ashes—educts of tobacco smoke—nicotine as a poison; its per-centage in smoke; its attenuations— <i>Tobacco Trade Review</i> —percentage of nicotine in tobacco—nicotianine; empyreumatic vapour, resin, and oil—ammonia—carbon or soot—carbonic acid, and the other gasses in smoke—watery vapour, its borrowed importance—experiments—best cigars, tobacco, and pipes 	25—37

CHAPTER IV. Smoking, the subject periodic and epidemic among journalists—duty and quantity consumed in Great Britain and abroad—a yarn about smoking in Constantinople—smoking hurtful to youth, whom it renders effeminate and nervous—hints to teachers and parents—personal observation and experience—Dr. Richardson—Sir Benjamin Brodie—the late Canon Stowell—the American Methodist Conference, and their charge—M. Bertillon, Paris; statistics among students— <i>Medical Gazette</i> , Lyons— <i>Medico Chirurgical Review</i> —Dr. Decassin—Lord Bacon—Dr. Winslow— <i>Lancet's</i> verdict—denunciation of hobble-te-hoy smoking ..	38—50
---	-------

CHAPTER V. The desire for tobacco influenced by the temperaments—the nervous need it most—temperamental importance—COMPENDIUM OF THE TEMPERAMENTS, shewing how they are affected by tobacco—how to decide which a person favours—Drs. Thorius and Hassell—Mr. Shipman—nervous, bilious, lymphatic, and sanguine temperaments; rationale for their smoking—individuality in smoking—nationalities; different reasons for their smoking—temperaments in ladies, their smoking; tobacco useful to bilious ladies	51—57
---	-------

CHAPTER VI. Conflicting views—tobacco, the least injurious of our luxuries— <i>British Medical Journal</i> —tobacco disinfectant, useful in epidemic and contagious diseases—the ladies' faith in it—this, an era of <i>anti's</i> —non-smokers protected by smokers—Dr. Ruef's opinions that tobacco is beneficial in consumption— <i>Medico Chirurgical Review</i> —Drs. Richardson, Baird, and Harvey's experience of tobacco in cholera—mankind improving in stature and longevity—tobacco does not produce specific disease, but rather prevents illness—Drs. Christison, Bucknill, and Conolly—advice to smokers—medical opinions— <i>Cope's Tobacco Plant</i> —the QUID—conclusion 58—72	58—72
---	-------

CHAPTER I.

"The first effects of tobacco are to soothe and tranquillize the nervous system. It allays the pain of hunger, and relieves the uneasy feelings produced by mental and bodily exhaustion. To the soldier, who has passed the night in the trenches before a beleagured town, with only a distant prospect of breakfast when the morning has arrived; to the sailor, contending with the elements in a storm; to the labourer, after a hard day's work; to the traveller, in an uncultivated region, with an insufficient supply of food, the use of the cigar or tobacco-pipe may be not only a grateful indulgence, but really beneficial."

SIR BENJAMIN BRODIE.

To live is to experience pleasure, to become acquainted with pain, and discover that our being was more pleasureable, when more recent. In youth, the capacity for enjoyment is so great, that but few extraneous wants are felt, and these easily satisfied. But when novelty of existence has ceased to enhance the perception of accustomed delights, new and more subtle sources of gratification are demanded by manhood's progressive mind. That fountain which can cheer, and give contentment, to the greatest number of men, of every race and nation, must be possessed of some especial quality

as a nervine. Such a source of happiness is most temperately, and yet amply, provided by tobacco. No marvel then, that it has many lovers who write and sing its praises, that the boon is often abused, and that in consequence, it is much and virulently traduced by not a few enemies.

An industrious German once collected the titles of 100 publications written against tobacco, and my own library contains more than that number of volumes "for and against" the weed. An impartial opinion has yet to be given upon "the great tobacco question," every writer on the subject having taken, or in the sequent assumed, either the *pro* or *con* view of the inquiry. The world will probably never be furnished with a totally unbiased verdict, for reason soon ceases to be insulated, and passion is enlisted in the controversy; consequently I trust my readers will only feel a homoeopathic amount of displeasure, should the following pages be no phenomenon in tobacco literature. Still, coming from a hand which prefers to hold the snuff-box rather than the pipe, they may be considered as little prejudiced as possible.

The use of tobacco, *before 35 years of age, is unnecessary; before 25, injurious*—injurious to mental energy, nerve-force, digestion, healthy cell-formation, muscular development, and normal stature. Height depends upon the skeleton, especially the long bones of the lower extremities, and the spine; none of which are fully ossified till 25 years of age, and many persons reach 30 before all their bony fabric is consolidated.

Every man of 30, not debarred by idiosyncrasy, may enjoy, and be the better for tobacco, if rightly and temperately used, but he should rather elect to reserve it as the comfort of age, than cherish it as a youthful luxury. When the body begins to lack its wonted elasticity, and the mind its pristine ardour—when the arena of active enjoyments becomes contracted, and the mind knows increasing pleasure from dwelling in reverie upon the past, then is tobacco most advantageous—as an amusing employment—a pleasant calmative, and an aid to reflection. A pipe never looks so well as in the hand of age, and I confess it is more suitable to that period of life, than the snuff-box. It employs much more time, and enables the patriarch to whiffle, and wile, and dream away many an otherwise lonely hour. My own father, after being satisfied with snuff for 55 years, judiciously added smoking to his octogenarian comforts; and very useful it proved in helping to fill up his time, and bring rest to a mind, which nature or snuff, or both, had rendered more and more active, as its tenement declined and became more feeble.

That tobacco is not required, and should never be indulged in, till the constitution has attained maturity, is an axiom which cannot be too soon accepted, especially by the “young men of the period.” It has been well established by hundreds of observers, emphatically so by anti-tobacconists, who were called into existence, and only survive as a society, through the abuse of tobacco, by the infraction of this doctrine. One of the most recent, and probably best, verifications of the foregoing proposition, occurred in the personal experience of

Professor Huxley, who, in speaking of tobacco at the British Association Meeting, at Liverpool, Sept., 1870, said :—"For 40 years of his life tobacco had been to him a deadly poison. In his youth, as a medical student, he tried to smoke—in vain. After entering the navy, he tried again to smoke, but still in vain. For a long time he had a great antipathy to smokers, yet now he was a pervert. There was a substantial kind of satisfaction about smoking, if kept in moderation ; and he must say this for tobacco, that it was a sweetener and equaliser of the temper." The gifted professor had become a "changed man." Since his student days his system had changed. That which was poison to him when young, was probably instrumental in saving his life, on that cold wet day he spoke of in Brittany, and had in the course of constitutional changes, become positively beneficial to mind and body.

Two large classes of men might with reason, object to being deprived until they are *senile*, of such relief from ennui, or alleviation of distress from fatiguing occupation, or perplexing studies, as a cigar or pipe can give them. Those who have no cares, and so much time at their command, as to cause it to be the serious consideration of each day, how most elaborately to dispose of it ; whose lips a visitor from another world might think were given for no other purpose than to hold a cigar ; from such pre-occupied lips, I would not recommend the loved Havannah to be estranged. Any engrossing engagement is better than total vacuity of thought, and smoking has the really beneficial effect of diverting the mind, and preventing to some extent,

youthful passions, running riot in more objectionable courses; in paths more vicious, because affecting the public, and its morals.

The other class embraces two orders, who, from constantly living with the "steam up," either waste their bodies by prolonged and exhaustive toil, "cudgel their brains" with harassing thought, or both combined, as often occurs in the medical profession. To such fatigued or anxious persons, a pipe is really a savings-bank of health; overtime, piecework, or long protracted mental strain, taking more out of their economy than it can recuperate, from food snatched during brief intervals of toil, and hence apt to be ill-digested. The change, or total cessation of bodily or mental effort, which nature periodically demands is insufficient, and too rarely granted by business exigencies or family necessities. Every mature man of the latter class, may draw compensation from an after-dinner and evening pipe, and feel as much the better for them, as if he had slept instead of smoked. Illness more than imminent, this useful remedy enables the sons of toil to ward off. Rest all but imperative they find, from daily experience, can in a great measure, be atoned for, by having recourse to the agreeable, albeit artificial, repose which tobacco so sweetly yields.

The feelings and example of 11 generations have now been handed down to us, affording the most potential proof, that tobacco is capable of refreshing the weary and easing the care-worn. Oviedo, in 1535, recorded that, "The negroes cultivate the herb, for the

purpose of smoking, in the grounds of their masters, and they say that the use of it, after they have concluded their labours, takes away the sense of weariness." Lobel, in 1576 wrote: "Most captains of West Indiamen smoke; they say it allays hunger and thirst, gives them new strength, exhilarates their spirits, and that it calms the mind." Dr. Carpenter, in 1865 said: "The common experience of mankind seems to show that, when the supply of food is *less* than the wants of the system require, small quantities of alcohol, of tea, coffee, or tobacco, makes that food go further; and the craving for one or other of those articles, which shows itself most strongly among ill-fed populations, or under circumstances of extreme privation, appears to indicate that they exert some decided effect upon the system." An intelligent smoker, in the year of grace 1871, will support the experience of the negro and West India captain of the 16th century; and that the feelings of comfort afforded by tobacco are real, and not fancied, and its use to a wearied frame beneficial, and not injurious, is testified by the experience of some 2,000,000 warriors, in the late Franco-Prussian war.

Nor is its cheering influence followed by gall and wormwood. According to the evidence of some, and the admission of other authorities, tobacco is the best, and, at the same time, the least injurious of our comforts, because it produces least reaction. It serves to make an amend to nature, for laws outraged, excitement overdrawn, and satisfies many inborn and undefinable cravings which perplex the ever yearning soul. Trials are consigned with his twist to the workman's familiar

“cutty,” and consumed—philosophy coming with the smoke, and cares thrown aside with the ashes.

But while I would grant indulgence in tobacco, to the young lord who has nothing to do, and too much time on his hands in which to do it; to those who are too hard-worked physically or mentally, and to all classes when advancing in years, and unable to realize the active joys of youth, there are other smokers, in a crusade against whom I could heartily unite with my anti-tobacco friends. First and most objectionable are childish smokers. When I see a boyish unfurnished face, sucking a cigar or “clay,” I feel strongly tempted to lift my umbrella, and smite the scathing fire from the juvenile mouth. I can only feel pity for the would-be man, strutting along with one eye upon his elders soliciting admiration, and the other cast in contempt upon any young companion, who more fortunate, or more honest than himself, does not possess the coin to purchase a penny Pickwick or pipe of shag.

In Great Britain there are about 2,000,000 boys and young men, who smoke for no other reason, that I can see, than that men do so; the principal ambition of not a few being to emulate each other, in lighting one cigar at the end of that preceding, or in producing an even, equal colour upon their idolized meerschaums. Like Charles Lamb, they will toil to accomplish this, “as some men toil after virtue.” If these young men would but “toil after virtue” “with half the zeal” they devote to their meerschaums, there would be more of it extant. With minds, too buoyant to have

known deep-rooted and abiding grief, too young and elastic to have experienced total prostration, from over arduous labour—they cannot claim that they need the soothing influence of tobacco, to enable their untaxed digestive powers sufficiently to renew tissues, which they have taken no exercise to exhaust, and brains which are dull only from want of use. The proper place for men of that age, is certainly not the cloudy and mephitic air of the smoking room. If they would worthily fulfil what will be expected of them as England's hope and future strength, they ought, during their leisure moments, to be either bracing their frames by healthful exercise amidst the beauties of nature, or improving their minds by studying their mother tongue, German, French, History, Natural and Physical Science, &c.

Instead of lazily dreaming over a cigar, young men should be “up and doing,” endeavouring to remedy deficiencies in education, the result of neglected lessons and truant days from school. Life is short; opportunity may come but once; if it be not seized then, it may for ever elude the most eager grasp. If our beloved country, is to escape the dire humiliation which recently surprised the French people, and if it is to continue to sustain a fore-most rank amongst nations, its youth must forswear the indulgencies into which too many recklessly plunge—gratifications only becoming age—and omit no opportunity of invigorating body and mind, that they may be ever ready for “life's duty,” lest one day some hostile nation should hurl confederated legions upon our sacred isle, and find Britain but a name, and her sons degenerate.

At 21 years of age, the soul neither yearns for, nor needs the repose which slumbers in tobacco-leaf: if not estranged by adverse example, it would rather pant for action. The young man who hopes for preferment, and wishes to "bend circumstances," must refrain from yielding to the temptations of his smoking companions. Let him take a good aim at perfection, and he will be certain to come much nearer it than if he had no object in view. As an occasional stimulus to effort, he might from time to time, repeat some such resolve as the following, composed during my boyish days, when hope was high:—

No middle path for me, my soul doth crave
A laurel wreath to crown me, or the grave
May have my body, for the worms a prey;
The ardent spirit then will soar away.

I cannot brook to glide unknown through life,
See other travellers pass me in the strife,
Who stood at first in an inferior place,
Or started later in life's fitful race.

"Still persevere"! my watchword shall be here
"Never give up," still onward persevere.
I'll sternly shun soft ease, wait, watch, and toil,
Rise with the dawning sun, and burn the midnight oil.

The standard set up in these verses may be too lofty, and it may be well for the adolescent's health, that he depart from it somewhat; but if a young man do his best, according to his strength and opportunities, to act up to such sentiments until he attain his 40th year, he will have little of which to complain. He may lay

claim to wisdom, will then be in a position to take the world more easily, to relax himself, smoke his cigar, and enjoy it without fear. For he who does not begin to smoke, or feast, or drink, until middle life, is rarely overcome by these habits, and never altogether enslaved by them. Material satisfaction will then be his pleasant portion in each daily and annual retrospect, and a rare fund of agreeable reminiscences, together with a plenteous store of mental food, accumulated for his future gratulation, when whiffing his quiet pipe during the latter decades of life.

I will now call the young reader's attention to the following portion of the *Lancet's* verdict, given at the conclusion of the tobacco controversy, in its columns, 1857:—

“Smoking in youth, before the frame is set,
Is properly and wisely censur'd; yet,
Will youth abstain, or smoke one pipe the less?
Still they are warn'd their smoking is *excess*.
'Give up' tis said (and said in serious mood)
A dubious pleasure for a certain good;
And should you do so, then, beyond all price,
In after years you'll value the advice.”

I need scarcely add that the serious mood of a journal of the calibre of the *Lancet*, ought to be sufficient warning for youth to smoke not “one pipe the less” merely, but to relinquish the practice until “after years,” when it will in my opinion, be “a certain good” to them. Then they may enjoy it, together with “Virtue's prize,”

“The soul's calm sunshine, and the heartfelt joy.”

CHAPTER II.

"We shall see, that the salivary fluid itself exerts an important converting power on the amylaceous components of the food. Hence, the practice of eating so rapidly that mastication and insalivation are insufficiently performed, is extremely injurious; and the prolonged continuance of it may lay the foundation for the distressing complaint termed dyspepsia, or difficulty of digestion. When any form of this complaint exists, too much attention cannot be paid to the efficient reduction of the food in the mouth."

DR. W. B. CARPENTER.

I PROBABLY cannot do better than devote this chapter to a brief description of the digestive process, dwelling especially upon such stages of it as are under our control; in order that the reader may comprehend how smoking and chewing are injurious to the health and stamina of the young; while, on the contrary, smoking is often beneficial, and only in exceptional cases hurtful to persons of mature years.

Suppose abundance of nutritive food at command, and a vigorous appetite awaiting it; for its proper digestion and assimilation by the system, it is very important that

it be first well and deliberately chewed, so that the aliment may be finely divided, pulpified, partially dissolved, and altered; in short, pretty well digested, by due admixture with saliva and mucus, ere it passes into the stomach.

Sound teeth, a cool mouth, abundance of natural saliva, ample time for meals, and no little patience in mastication, are requisite to efficiently accomplish this necessary and agreeable stage of alimentation. As if to ensure that the food shall be well comminuted, Providence has kindly ordained that the more it be chewed and moistened, the more pleasant it becomes to the taste. This is a prime source of gratification to those who leisurely chew their food, and one I have often noticed, when eating bread, potatoes, and other farinaceous viands; the gradual change from being tasteless, to sapid, from their starch being converted into grape sugar by the action of the saliva. This is the first conversion of the food—it begins after about 25 seconds mastication.

If you are not so fortunate as to have teeth capable of satisfactorily grinding your food, it would be wise to call in the dentist's aid; otherwise the health will ultimately suffer, for the habitual swallowing of imperfectly chewed masses imposes more upon the stomach than it can well accomplish. Decomposition of the coarsely divided gastric contents will then be apt to occur, with sour and foetid eructations, causing further decay of the teeth, with many other evils and discomforts.

The preparation of the aliment in the mouth may be called buccal or mouth digestion. For much of the fluid portion, holding in solution the saline, gummy, saccharine, gelatinous, and albuminous elements, being already sufficiently digested, by the action of the saliva, if it be plentiful, is at once, and without further change, absorbed through the coats of the gastric veins, by lateral capillary attraction or endosmose, and enters the portal circulation. There it is depurated, and further assimilated to the nature of blood, by elaboration of fibrine, fat, red corpuscles, &c.

The remainder of the ingesta is churned, so to speak, for from 1 to 5 hours, according to its solubility, by alternate contraction and relaxation of the muscular coats of the stomach, until it has become saturated with gastric juice. This fluid, of which about 15 lbs. are secreted in 24 hours, contains, besides hydrochloric or lactic acid, salts and solid matters, a principle allied in action and properties to the ferments, called pepsine. The pulstaceous product resulting from the admixture of the gastric juice with the food, is called *chyme*. Portion after portion of which, when properly prepared, presents itself at the pyloric orifice of the stomach, which relaxes under the recognized stimulus, and the chymous fluid is forced into the first part of the small intestines, the duodenum. This goes on until all the meal has passed from the stomach. If more has been taken than is required for the current wants, or than the stomach can dispose of at one digestive effort—it will lie half-steeped, until a fresh secretion of gastric juice takes place, or until it be ejected by vomiting.

A third stage, or properly speaking a third digestion, takes place in the duodenum. There the acidity of the gastric juice is neutralized, the oily portion of the pabulum, which hitherto resisted the digestive process, is emulsified, and such of the farinaceous and albuminous food, as may have escaped the buccal digestion, from too hurried mastication, or other cause, is subjected to the action of the pancreatic and intestinal salivas. These two secretions are alkaline in reaction, and contain a ferment which assist in the reduction—their average daily quantity is estimated at 17 ounces. In the course of 24 hours, about $3\frac{1}{2}$ lbs. of bile are also poured into the duodenum. Its nature is that of a soap. Instead of containing a fermenting principle, like the other secretions I have named, it is thought rather to be of service in preventing the fermentations, previously set up, from going too far. By the admixture of bile, pancreatic, and duodenal secretions, the chyme becomes separated, by precipitation, into a milky solution, named *chyle*, and an insoluble part, composed of husks of grain, fibres of muscle, and such portions, if any, of unmasticated food, as have withstood the entire process. These are carried forth from the body, together with a residual portion of bile, and the secretions of solitary glands, which are scattered over the whole of the alimentary canal, for the purpose of withdrawing from the blood the worn-out material of the organism.

The chyle, or nutrient part of the food, is taken up by a network of absorbent vessels called lacteals, and carried to the mesenteric glands, where a portion of the red corpuscles of the blood are elaborated,

and part of the albumen converted into fibrine, then through the thoracic duct, where it mixes with other white blood or lymph, returned from the different tissues, by the lymphatics, or absorbents proper, as drainage, after having supplied nourishment to the different corporeal structures. The chyle and lymph, from the thoracic duct, enters the vena innominata or unnamed vein, and passes through the great descending vein, the conduit of the blood, from the upper half of the body, into the right side of the heart. After mingling with the blood from the lower extremities in the left side of that organ, it is propelled to the lungs to be oxygenized.

The digestive process is the elaboration of new blood, from the material taken into the body as food; it begins in the mouth, and is completed in the lungs. Every one, therefore, (more especially those who suffer from indigestion) should be careful to masticate and insalivate their food well, and afterwards to aërate or purify it by walking, or other exercise in the open air. These being two of the most important parts of the digestive process, and, at the same time, the only ones over which we have control—I repeat, and wish to do so with emphasis—that it is indispensable to individual well-being and comfort, that every one refrain from bolting his food, or wasting his saliva. Also, that he aids nature in her later operations—by assisting appropriation of the food, now part of the blood, by muscular exercise, and burning or oxygenizing it by fresh air. He will thus begin and end the digestive process well. The intermediate stages must be consentaneous with the beginning and the end; therefore, if no consumptive or

other constitutional proclivity exist, he must ere long digest well, and even if such diathesis be present, it may relinquish its hold in time, by the formation of new and healthy blood. Dr. Robert Dick says that "Tobacco is a fertile source of dyspepsia. It first increases, and afterwards diminishes the secretion of saliva, as well as of mucus, and doubts not but its protracted employment impairs the action of the liver and pancreas. It not only lessens the saliva, mucus, and bile, but makes them thinner." These effects are thought to be due to the action of the ammonia and nicotine, which latter acts by diminishing the vigour of the pneumo-gastric nerves, the nerves which preside over digestion.

To understand the philosophy of a most frequent cause of indigestion, remember that a proper quantity of healthy saliva is essential for the mutation of starch taken as food into sugar. And that, together with the mucus of the mouth, saliva is capable of preparing for absorption into the blood, every kind of aliment except oil and muscular fibre. From 20 to 30 ounces are secreted daily, containing 15 to 20 grains of ptyaline, and nearly one per cent. of saline matter, almost identical with the salts in the blood. When any considerable quantity is ejected, the excited and overtaxed salivary glands secrete a vitiated sub-alkaline fluid, often deficient in quantity, and unfitted to fulfil its share in preparing the ingesta for absorption. Part of the starch, and other components of the meal, must then remain unchanged, until they have passed from the stomach into the duodenum, thereby causing delay in digestion, loss to the system, extra work for the pancreas and duodenal

glands, and not unfrequently fermentation, amounting to putrefaction. Hence follows dyspepsia, with its concomitants: flatulence, eructations, heartburn, palpitation, uneasiness about the stomach, diarrhoea, languor, headache, dejection of spirits, &c. Crude blood is then formed—blood inadequate to preserve the vital organs in a state of health, the mal-assimilated pabulum, which is supplied to them from the incapable blood, cannot renew the loss by wear and waste, for the new cell formation, not being properly vitalized, is imperfect and worse than useless. It becomes, really, so much foreign matter, cheesy in appearance, which, after a time, may be reabsorbed, only to further contaminate the already vitiated blood, and be once more deposited, this time, as irremediable miliary tubercle, *i.e.* CONSUMPTION.

This failure of nutrition occurs more frequently in the lungs, than any other viscus, in consequence of their receiving the newly assimilated blood first; their double circulation, and consequently greater quantity of blood passing through them; their incessant activity, liability to congestion, from vicissitudes of temperature, and other accidental sources of irritation. The succession of effects from the cause is patent; it is only surprising that the system has such recuperative power that so few comparatively succumb. As the demand for nourishment becomes less, from the frame ceasing to grow, and the bones to consolidate, as the fire and activity of early life gradually abate; in short, each year after 28, the tendency to true tubercular exudation in the lungs decreases. If, therefore, you have attained that age, should feel exhausted with your work, have a poor

appetite, and but imperfect teeth, one pipe after each meal (if you do not expectorate) will conduce to your longevity, by aiding unsatisfactory mastication, and by sustaining and soothing the fevered frame.

Many theories of digestion have at different times been propounded. To begin with the 17th century, one class of physiologists taught that *trituration* was sufficient preparation to enable the system to appropriate the aliment. Another, in opposition to these mechanical theorists, promulgated the hypothesis that digestion was merely *fermentation*. Then anatomists, not to be beaten, came to the front, upholding the speculation that digestion was due to *nervous action*. For the most recent view, the one nearest the truth, we are indebted to the chemists: digestion is *chemical solution*.

Each of these theories possess their modicum of truth, and a union of the four doctrines will afford the best solution of the problem: how is the animal machine repaired? The chemical action of the gastric and other juices would be of little avail in reducing the food to a suitable state. If the aliment were not, in the first place, minutely divided by the teeth, and disposed to, or rendered more susceptible of solution, by the different ferments existing in the salivary, gastric, pancreatic, and intestinal secretions, and if the whole process were not governed by powerful nervous influence, the chemical theory would have to be abandoned as insufficient. The chemist acts upon this principle, and follows nature when he pounds down his raw material, before digesting it for tinctures.

In proof that nervous action is of immense importance in the preparation of food for our corporeal wants, anatomists can advance the fact that the stomach is more largely furnished with nerves than any other organ, and that it derives its supply from every nervous source, from the brain, spinal cord, and sympathetic nerve. It receives a larger share of nerve force, direct from the brain, than any other viscus, the pneumo-gastric nerves being in great part distributed over it, hence, it may be considered an organ of special sense; indeed, none of the external senses are so important as hunger.

The imperial sway which the brain, through the medium of the pneumo-gastric nerves, exercises over the stomach, is forcibly exhibited in the effect produced on the appetite and digestion by violent emotions, such as disappointment, passion, fear, grief, anxiety, pain, and disease, any of which will arrest the secretion of saliva, gastric juice, &c., and consequently the digestive process. On the contrary, equanimity of mind, cheerfulness, or laughter, have a good effect in promoting digestion.

The younger an individual, the more susceptible are his nerves to every kind of impression. Hence, the child avoids hot food, pepper, and mustard, feels the smart of pain, or the taste of medicine, more acutely than the man, who relishes his meals "piping hot," and well spiced, a taste which has its origin in the advantage which he finds to accrue from the use of condiments in whetting his appetite, and aiding tardy digestion. Although he may be of the same weight and stature, a man at 21 is more affected by cold, stimulants, medicine,

poison, or starvation, than another at 40 or 50. The pulse must also be taken into consideration, as it constantly diminishes in frequency from 140 at birth to 70 in the 70th or 75th year. This decreasing susceptibility of the nervous system, and of the pulse, as indicated by the effect of potent re-agents, is sometimes equivalent to all the difference between a remedy and a poison. Smoking makes the rapid pulse of youth quicker, and powerfully affects the nervous system, causing giddiness, and more or less loss of nervous force. The stomach sympathises, and vomiting ensues. An adult under 30, will experience the same sensations, for the first few trials; soon however, he ceases to feel uneasiness, and flatters himself that he has become seasoned, and may safely continue to smoke, but he may not yet do so with impunity. The indulgence sets up an artificial fever—wastes a portion of saliva, which the incompact frame can ill spare—depresses nervous power—enervates the muscles, a fact recognized by those “in training”—inclines the devotee to sit under a cloud in a close room, instead of cheerfully welcoming the morning sun in a bracing walk—is a waste of money, valuable time, and health—lastly, it is not at all required; it can supply no want, fulfil no end. Surplus time and energy might be more advantageously employed in gymnastics, reading, writing, good society, &c.

On the other hand, in a person of middle age, smoking does not so much excite the pulse, nervous system, or salivary glands. And if the worry of business, anxieties of a family, or poignant grief, should overwhelm him, it will lower the pulse, by allaying mental suffering.

Nature, indeed, seems to have anticipated that the intellectual rack of these later ages, would require artificial rest, and also the manner in which it should be taken, for she has provided pancreatic and intestinal salivas, as if, in order, to make amends for deficiency or depreciation of mouth saliva. In a growing youth, this compensation, by the menstruum of the third for that of the first digestion, is not altogether an equivalent, for, although he may have replenished his stomach, his system, will be, nevertheless, for a short time, starving for lack of the immediate supply of fuel, afforded through the agency of the salivary digestion. Besides, in expectorating saliva, the smoking youth is really expending what is equivalent to a portion of his blood; that secretion containing the same salts which compose the solid structure of bone, and, in a less degree, the muscular, and some other tissues.

If, however, a man be basking in the sunshine of life, a little quickening of his gradually flagging pulse will be useful in helping to keep him thin—delay in his digestion may also prove beneficial. For a middle aged gentleman too frequently continues to eat the same amount of food as when still growing, thereby causing the stomach to labour under the incubus of a load far in excess of the requirements of his body, which, if not worked off by exercise, or relieved by occasional diarrhoea, tends to induce gout, kidney or liver disease, apoplexy, inflammations, or congestions. Indeed, many persons, as Dr. Brinton observes, “wear out their constitutions by the mere exertion of good living.” An attached lover of tobacco is, however, rarely a gourmand, and *not* often a

wine-bibber, the narcotising influence of nicotine, upon the brain, and nerves of the stomach, benumbing, to some extent, the activity of that organ. This result, which cannot be otherwise than injurious to a growing youth, is often beneficial in middle and advanced life ; moreover, the connoisseur's *penchant* for the weed, will generally induce him to rise early from the table, in order more fully to enjoy its peculiar charms.

Having spoken of the respiratory process, as a sequel to the digestive one, I will conclude this chapter with a few words upon the importance of breathing fresh air, in order to promote good digestion and robust health. The temperature of our bodies is maintained at 98 degrees, chiefly by the chemical union of carbon supplied by the starchy and oily or fatty components of the food, which, by combining with the oxygen of the atmosphere in the air-cells of the lungs, evolves warmth or animal heat. This it does in the same way, the chemical decomposition being precisely the same as that which occurs in a fire place, where the oxygen in the air of a room, by uniting with solid carbon, in the form of coal, produces heat. The red corpuscles which give colour to the blood, also convey carbon from the tissues, for combustion in the lungs ; when they arrive at the air-cells, they are dark red in colour, but upon exposure to the inspired air, they give off carbonic acid, with which they are charged, and absorb oxygen ; they then become scarlet in hue, and are fitted to repair the various tissues, especially the muscular and nervous structures, every action or thought of which causes disintegration of substance, and appropriation of both the red corpuscles

and the oxygen of which they are the principal vehicles. As tobacco smoking arrests oxidation, and consequently causes an accumulation of carbon in the blood, and as muscular and nervous tissues cannot be renewed without a due supply of oxygen, and are injured by excess of carbon, the practice must be injurious to growth, mental power, and physical activity in youth.

The great importance which the Creator attaches to changes effected in the lungs, on the character of the blood, is indicated by His devoting one-half of the heart and the whole of the lungs entirely to it, and by the heavy and too often fatal penalties which are attached to want of exercise and pure air. Most ladies, however, and a great many smokers, ignore nature's need for fresh air; the former, by wearing tight corsets, and staying much in the house; the latter, by electing to smoke in company within doors. The volume of air which passes through the lungs is estimated, by Dr. Edward Smith, to be—

In a state of rest, 400 cubic feet in 24 hours.			
„	tradesman,	600	„ „
„	labourer,	900	„ „
„	severe toil,	1000	„ „

A sitting room, 16 by 14 feet and 9 feet high, contains 2000 cubic feet of air. If a number of persons sit long in such a room with the door and windows shut, and the gas burning, they must soon begin to breathe exhausted air, which is neither more nor less than slowly poisoning themselves by carbonic acid, and starving themselves

for want of oxygen. It is setting the folly of the creature against the wisdom of the Creator. If a person does not take sufficient exercise, he will not respire air enough to effect the changes which are requisite to encourage good digestion, and preserve the organism in a state of health. He must then suffer the result, which will ere long be shown in some form of the many physical ills to which flesh is heir. The most probable being: in youth, development of scrofula, lingering of the blood in the capillaries of the lungs, which, from being defective in quality, will be liable to deposite consumptive matter there: in middle and advanced life, gout, rheumatism, accumulation of superfluous fat upon the body, and around the vital organs, weakening from loss of original structure, by fatty degeneration of the tissues themselves, especially those of the heart, blood-vessels, liver, kidneys, brain. The substance of muscle, and parts of less importance to life, also, suffer from the same degeneration.

Surely I have said enough on this subject. I will, therefore, light a cigar, and taking a little of my own counsel, step out for an airing.

CHAPTER III.

Imperial Cæsar, dead and turned to clay
May make a pipe to wile the hours away.

SHAKESPEARE (adapted.)

"Of harmless bowls I mean to sing the praise,
And th' herb which doth the poet's fancy raise ;
Aid me, O Phœbus ! Thee I do invoke,
Fill me a pipe (boy) of that lusty smoke,
That I may draw the god into my brain,
And so enabled, write a busken'd strain,
For nothing great or high can come from thence,
Where that blest plant denies his influence."

DR. RAPHAEL THORIUS.

As an aid to the consideration of "the great tobacco question," it may not be amiss to make ourselves somewhat acquainted with the chemistry of tobacco, it being adjuvant to the chapter upon digestion, and corollary to the whole subject. Most of my readers having doubtless preferred to beguile their time by smoking, snuffing, or chewing, rather than studying the

effects of tobacco upon themselves or neighbours, I may, therefore, state that dried tobacco leaf contains—

NICOTINE (a liquid alkaloid) from 2 to 9 per cent.

NICOTIANINE (an aromatic essence) about 2 grains
per lb.

A BITTER EXTRACTIVE PRINCIPLE.

A YELLOW OIL AND SOME FATTY MATTER.

GUM AND MUCILAGE.

TANNIN AND GALLIC ACID.

WOODY FIBRE.

SALTS OF LIME, POTASH, MAGNESIA, SODA AND
AMMONIA.

SILICA OR SAND.

MOISTURE.

When manufactured, tobacco contains, in addition, carbonate of ammonia and added water, but rarely any adulteration. 100 lbs. of newly gathered tobacco will only give 12 lbs. of the dry leaf, 88 per cent. of water passing off in the process of drying. In its green state, but little nicotine, and only minute traces of nicotianine, can be detected. They seem to be secreted from the juices of the plant, in little glands, during the sweating stage of the curing process. When skillfully fermented, the glands burst, these principles escape, and become diffused through the leaf, but when over manufactured, as is sometimes the case, they are dissipated, and the tobacco is rendered of less value. In the preparation of snuff, on the other hand, 60 or 70 per cent. of the nicotine is purposely driven off by fermentation, lest its excess should induce

headache. A considerable amount of the satisfaction derived from snuff-taking, is undoubtedly due to the nicotianine, and the titillating effects of the ammonia formed, and sometimes also added, during manufacture. If tobacco be chewed, it is from the nicotine and nicotianine that the chief pleasure is derived, for were it not that there is an extra duty upon sweetened tobacco, lovers of the quid would prefer neutralizing the taste of the bitter extract, by using tobacco prepared with molasses. When smoked, some altogether new elements are formed. Every pipe is a small still. Smoking is what chemists would term destructive distillation. Our tobacco-smoke distiller is superior, however, to most of the essentials of ordinary distillation. He simply applies heat to his still, makes a vacuum with his mouth, thus causing the products to flow downward through the substance he is operating upon, and having taken toll of the fumes or distillate, he repeats the process until he has extracted the desired gratification.

By the process of smoking	{	SMOKE.
tobacco is resolved into		OIL.
		ASHES.

As it will not take long to consider the oil and ashes, I will dispose of them first.

ASHES.

The *Ashes* consist of the salts enumerated on last page. Dried leaf yields about 20 per cent. This richness of mineral matter causes tobacco to be very exhaustive to the land upon which it is grown; indeed, one of the tests

of the genuineness of tobacco, is to estimate the percentage of ash left after incineration. Of the various leaves which have been used as adulterants, only beet and cabbage come near it, in the amount of earthy matter which they contain.

OIL.

The *Oil* of tobacco comes from the yellow oil and fatty matter, naturally in tobacco, from what may be added to it to prevent it adhering when manufactured into roll, and from a fixed oil, resulting from combustion of the nicotianine. It is intensely acrid, in consequence of containing the most of the nicotine and bitter extractive principle dissolved in it. This bitter extractive is the chief cause of the sickness and vomiting which is so troublesome to the novice in smoking. It blackens the teeth, and increases the flow of saliva, but we may well forgive it these effects, in consideration of the valuable safeguard which its strong, disagreeable taste affords in preventing beginners suffering from nicotism. The initiated are well acquainted with the oil of tobacco, it being the oily fluid which distils along the tube into the mouth, when smoking a well used and sweet (?) pipe. * It ought never to enter the mouth, being powerfully narcotic; indeed, so soon as the smoke begins to come hot, bitter, and heady, the meerschaum should be thoroughly cleansed, or the clay pipe thrown away, as further smoking with them will, sooner or later, cause

* The oil should not be mistaken for the watery fluid which is drawn into the mouth, from every pipeful of wet tobacco, especially when smoking a short, hard pipe (see Watery Vapour, page 36.)

nervousness, and perhaps intermittent action of the heart. The oil is absorbed by the bowl and neck of a meerscham, to which it, or rather the nicotine dissolved in it, on becoming oxidized, gives the beautiful burnt sienna hue so highly prized. It may be seen in globules, in a good specimen, after smoking cavendish, or other dark leaf tobacco. A Hookah, or a new soft "churchwarden," from Broseley, in Shropshire, are however, the best means of obtaining a dry soothing smoke, and avoiding the narcotising effects of the oil.

SMOKE.

The *Smoke*, with which man delights to regale his palate, is the *best known sedative*. It consists of the following products:—

NICOTINE.

EMPYREUMATIC VAPOUR.

Do. RESIN and OIL.

AMMONIA.

CARBON or SOOT.

CARBONIC ACID and CARBONIC OXIDE.

HYDROCYANIC ACID.

SULPHURETTED HYDROGEN.

CARBURETTED HYDROGEN, or FIRE DAMP.

PARAFFIN.

WATERY VAPOUR.

Nicotine is one of the strongest poisons in existence; three drops, *when pure*, being probably sufficient to kill any man who is not in the habit of chewing. But a great deal too much has been made of this fact.

Innumerable dogs, cats, guinea-pigs, &c., have been sacrificed to prove its potency, and an anti-tobacco lecturer will occasionally make a would-be telling speech out of it, gravely informing his hearers that, in smoking half-an-ounce of tobacco, 8 drops of nicotine (a very poisonous quantity) are taken into the mouth and system! Thus, attempting to establish too much, for many of his audience daily prove the contrary. They bought the quantity named, in the morning—will finish it, and more perhaps, ere going to bed—having done so before, they do not believe what they have heard, and consequently are not converted. The fact is much of the nicotine is destroyed during combustion. In Turkish or Lynchburgh tobaccos, little more than 1 per cent., by volume; in returns, brown and black twist, 6 or 7, and in some French 10 per cent., comes into the mouth in the smoke; of this *attenuation* 95 to 99 per cent. are again puffed away. Besides, a portion of what is retained is probably weakened by the acid mucus of the mouth. If you expectorate, another attenuation of the nicotine is thereby effected, but if the pipe be kept clean, and no oil permitted to run along the tube into the mouth, there can be no necessity for sputation. If it be proper to smoke at all, the nicotine will be sufficiently reduced. Up to the present time, no well authenticated instance is on record of tobacco having directly caused the death of a devotee of the pipe or cigar, hence we may believe the following sentence from *The Tobacco Trade Review*: “The quantity of nicotine, which escapes the burning process, is so infinitesimal that a hard smoker would have to concentrate about 5 years smoking into 24 hours, before he could appreciate

the poison at all". Moreover, nicotine is one of the most evanescent of toxic agents; hence when absorbed, it is eliminated so quickly from the body, that it does not seem to do any, or much harm, even when a "black cutty" is the effective agent of its introduction into the mouth. Nicotine being the most active principle, a table shewing its per-centage in the kinds of tobacco commonly consumed in Great Britain, would be an important guide to those who are anxious to avoid feeling the effects of its excess. But such a synopsis cannot be satisfactorily made, for the weather, soil, manure, and success in curing will influence its properties, also, *strong*, *medium*, or *mild* tobacco may be obtained from the same plant, by succouring, *i.e.* by regulating the number and size of the leaves, or by harvesting them at 3 different times, *viz.*, by plucking the lower leaves first, then in 8 days the middle, and in other 10 days the top ones. Besides, the manufacturer, taking counsel from cultivated taste and experience, judiciously blends different varieties of leaf in preparing his commodity, and thus supplies the consumer with an article of modified strength, and of fuller and finer fragrance than he could produce from leaf of one growth only. Again, the manufacturer will be influenced, to some extent, by the state of the markets, and quality of the growths of a year, in selecting the material from which to furnish the particular tobacco in demand, his art being equal to making amends for deficiencies or failure in supply. Bear in mind then, that circumstances, or the fabricator's skill, may cause a change in the selection of the raw produce, and that the following table is only approximate as an index to the per-centage of nicotine, and the kind of tobacco into which each growth is manufactured:—

NAME OF LEAF.	PER CENT- AGE OF NICOTINE.	USED, OR MANUFACTURED INTO
*VIRGINIA	7	Cavendish, Negrohead, and Black Twists; Returns, Shag, with light mild tobaccos; Snuff.
*KENTUCKY and *MISSOURI	6	Cavendish, Brown Twists, as Pig-tail, Bogie, Alloa, Bristol Bird's Eye, Returns, and Shag.
*CONNECTICUT..	6	For fortifying milder Tobaccos.
*OHIO	3	Bird's-eye; brown twists; mixtures
*MARYLAND ..	2	Maryland Cut, Short Cut or Returns; fancy mixtures.
FRENCH	9	Tobacco and Cigars by the French Government, mixed with Kentucky, Maryland, and Havannah; Snuff, with Virginia.
ALSACE	3	
DUTCH	6	Commonest Cigars, Cheroots, K'naster, and moist snuff.
GERMAN	4	Cigars, K'naster, smoking mixtures
*CUBA, *HAVAN- NAH, *MANILLA JEROME, COLUM- BIAN, OR VARINAS.	2 to 3	Cigars and Cheroots. Varinas tobacco.
JAVA & JAPAN	2 to 3	Cigars; mixtures; mild, moist Shag; substitutes.
LATAKIA	2	Latakia; to flavour mixtures.
TURKEY, GREEK SYRIAN, SHIRAZ EAST INDIAN, LYNCHBURGH, PARAGUAY.	1 to 2	Turkey, Persian, K'naster, Varinas; Light coloured fancy mixtures, and as substitutes for manufacturing purposes.

* These are manufacturer's staple growths.

It will assist this attempt at tabulating the relative strength of different kinds of manufactured tobaccos, if the reader will remember that the largest, thickest, and darkest leaves contain most nicotine, and are chiefly used for cake and roll tobacco; that the fancy mixtures of manufacturers, when dry, and not mixed with much thick, dark, leaf, are the best; and that shag, especially when wet, is almost the "worst smoke" a man can have, and if surpassed, only by a black Dutch or strong German cigar.

Nicotianine is a concrete, volatile, oil. It is of much importance to the connoisseur, for tobacco is esteemed the more fully it possesses the aromatic flavour of this tobacco-camphor, and is comparatively free from nicotine. Tobaccos containing much of this essence, are very fragrant; generally afford a cool, soothing, smoke; and rarely contain a large per-centage of nicotine. It is the principal cause of sneezing, when tobacco is taken in snuff; hence, Havannah in powder will make a person sneeze, who has long been accustomed to Kendal Brown. During combustion, nicotianine is resolved into empyreumatic vapour and a fixed oil.

Empyreumatic Vapour has much for which to answer to the ladies; its odour, particularly that from yesterday's cigar, being the reverse of agreeable; it not only adheres with great tenacity to window curtains, anti-macassars, woollen clothes, &c., but, more outrageous still, it has done much to abolish the good old-fashioned practice of kissing, in consequence of the objectionable smell it imparts to the breath. The principal charm

and pungency of fine tobacco or a choice cigar is derived from the empyreumatic vapour—those who snuff and chew escape or lose its penetrating effect.

The *Empyreumatic Resin*, when condensed, is of a reddish-brown colour, and the consistence of treacle : as it carries over with it some of the nicotine, and other principles in the smoke, it has the odour and taste of tobacco. From its readiness to condense, its consistency and tendency to agglomerate, it seems to be the principal cause of the pipe fouling. In roll tobacco, the oil used in manufacture, appears to fix a portion of empyreumatic resin, as but little of it is found in their smoke, compared to that from dry and light-coloured tobacco. Some volatile oil also passes over with the resin.

The *Ammonia* sickens, when tobacco is used in which much exists. It excites a flow of saliva, succeeded by heat and dryness in the mouth, and sense of burning in the fauces. When much is taken into the system, it is said to produce indigestion, and have a tendency to render the blood thin and less red, from its action upon the fibrine and red corpuscles, thereby interfering with the healthy action of the heart, and causing palpitation. It is, moreover, believed to suppress the secretion of bile, and thus may be, to some extent, blameable for the sallowness and palor of many smokers. But, opposed to these theories, I have observed that those who are constantly inhaling ammonia, *e.g.*, grooms and their families, who live above stables, are not remarkable either for want of colour, or indigestion. Both raw and manufactured tobacco contain ammonia, which is developed during fermentation.

The *Carbon* or *Soot* also irritates the mouth, tonsils, and fauces, being the chief cause of the "smoker's sore-throat" of Sir Duncan Gibb, in those persons who indulge too freely; this is especially felt during cold, damp weather. It creates a copious secretion of mucus, which it discolours, and which is coughed up, of a dark coaly appearance, on rising in the morning (Richardson.) The carbon, in minute particles, passes into the mouth in a current of watery vapour; together, they form the blue circling eddies, a careful observance of which affords so much pleasure to an ideal smoker.

Carbonic Acid is the gas which causes champagne to be so pungent to the palate, and so suddenly "heady;" being narcotic it arrests the action of the brain, to which it affords a temporary rest. Its effects are more fugitive than any other principle in tobacco. Richardson says that: "The sleepiness, headache, and lassitude, which follow prolonged inhalation of smoke, are largely due to carbonic acid." As ammonia and carbonic acid contain nitrogen, hydrogen, carbon, and oxygen—four ultimate elements which compose more than 90 per cent. of the human body—and as they are largely absorbed into the system from the smoke, they will not only be conservative of waste, but may, in some degree, serve for aliment when food is not well assimilated, deficient, or wanting. Indeed, much trust-worthy evidence is on record of men being preserved from death by starvation, through the use of tobacco.

Carbonic Oxide, Hydrocyanic Acid, Sulphuretted and Carburetted Hydrogen, and Paraffin, are generated only

in very minute quantities, and consequently are almost or quite innocuous—they, however, add a trifle to the aroma and piquancy of tobacco smoke.

Watery Vapour is important as a vehicle and solvent of the constituents of the smoke. By reducing it from a state of steam, they may all be gathered in solution, suspension, or discrete as the resin and oil. The easiest mode of collecting an aqueous preparation of tobacco smoke, is to procure a small hookah, and smoke slowly, without any water in it. The cool sides of the glass will condense a portion of the steam, which will collect in the bottom of the bulb. As you must smoke a dozen or more pipes, ere any oil of tobacco leaves the bowl of the pipe, it is apparent that the red-brown liquid, which will soon be seen in the bulb, is condensed from the smoke itself. Those who are curious about the empyreumatic resin, may observe it studded over the surface of the glass in minute globules, which can be dissolved out with spirit of wine, after pouring off the liquid. More or less of this aqueous reduction of smoke will be formed, according to extent of surface and thinness of the glass bulb, length and fineness of the tube which enters it, and dampness and kind of tobacco operated upon; *e.g.*, from a pipeful each of shag, returns, bird's-eye, Turkey, manufacturers' mixture, dry, I collected 3 drops; from the same, when moist, as purchased, 6 to 8 drops; while from black-twist, recently manufactured, I found as much as 14 drops of condensed steam, charged with nicotine, ammonia, carbonic acid, &c., and holding in suspension, tears of empyreumatic oil. From 10 to 30 per

cent. of the active ingredients in the smoke may, in this manner, be arrested in their transit to the mouth, leaving the remainder so *dry*, and free from nicotine, ammonia, empyreumatic resin, oil, &c., that a nervous or bilious person may, by means of a hookah, enjoy the luxury of a *cool* and soothing smoke, without fear of harm, or desire to expectorate. For the *drier* the smoke, the less of these stimulants will be conveyed to the mouth, and also, a much smaller proportion absorbed during their brief detention there. When rose-water is put into the hookah, the elements of the smoke are dissolved in it, in even larger proportion, but the smoke is not so dry, and the "hubble bubble" is unpleasant to a sensitive organism. From an extended series of experiments upon many different kinds of tobacco, I should say that a light-coloured cigar, of Foreign or British manufacture, made from Havannah, Philippine, or other mild tobacco; for the pipe, Latakia, Lynchburgh, Arabian, Orinoco, East Indian, Turkey, or, better still, the mixture of a good manufacturing house, will be the best and mildest to smoke. As cigars exert a stronger influence upon the system than the pipe, it is imperative for those who may feel their throat, mouth, nervous system, &c., affected, to use only the very mildest that they can procure. Age renders a cigar milder, but also deteriorates its flavour; so much so, that a cigar from a box which has been kept for more than 4 years, and only brought out on special occasions, is not worth one you can get for twopence at the nearest tobacconist's.

CHAPTER IV.

"The use of tobacco, in smoking, is hurtful to young persons who have scarcely attained their full development, and still more so to children. The enormous quantity of saliva which it causes them to secrete and waste, cannot but act injuriously upon the great functions of the economy. Young smokers are, in general, pale and thin, and the process of nutrition is not carried on amongst them with full effect; this is the more evident, since *habitués* usually indulge the practice under circumstances very injurious to their health."

Dr. B. A. MORREL.

UPON the universally interesting subject, Tobacco-smoking, I fear that I can say little, which has not already been oft repeated. Nearly 1000 books and tracts testify to its intimate connection with, and the conformity of authors to, popular taste. The theme, in all its aspects and tendencies, was treated exhaustively in 1857, in *The Lancet*, *Medical Circular*, and some foreign medical journals. It crops up, more frequently, in our periodical literature than any other; having become a favourite topic with writers, both lay and medical, it being always certain to arrest attention,

from the magnitude of the interests involved, and the myriads of men, and women too, who hourly draw from the combustion of tobacco, a satiating, yet an indescribable pleasure. Tobacco, having been so frequently written upon, it is unnecessary for me to give a description of the plant, its history, introduction into this country, culture, manufacture, and associations. I may state, however, that the duty in 1870, yielded to the British Government upon the imported leaf, amounted to £6,548,000—548 manufacturers were engaged in preparing it for the market, and about 280,000 retailers, wholly or partially supported by the sale of the commodity in its various forms. The consumption of tobacco, like that of snuff, received a great impetus from the examples of our officers, soldiers, and sailors, returning from fighting the battles of their country. Prior to 1815, the quantity annually used was less than 10 ounces per unit of the population; that of cigars being, until then, almost *nil*. It is now equal to 22 ounces per head, or about 7 pounds per man, constituting a voluntary tax of 30s. per annum; still, as only two-thirds of our adult male population smoke, Britain cannot be called a smoking country compared with other nations, for throughout Europe and America, 90 per cent. of the men smoke, and the consumption of tobacco, taking all the inhabitants of the globe, is estimated at 70 ounces per head. Japan seems to be a place of bliss for lovers of the weed, for there even the clergyman is said to pause occasionally in his discourse to enjoy a smoke, in which it is superfluous to add, he is heartily joined by the worshipers.

The following interesting account of the business of smoking, as it obtains amongst the Turks, is extracted from a letter lately received from a valued literary and travelled friend, who was some years on the Turkish Station. I have also to acknowledge my indebtedness to the same gentleman, for some important suggestions, which enabled me to improve the conceit, page 55 :—

“ Of all countries in the world, Turkey is *par excellence* that country where smoking is practised as an art, and studied as a science. Enter a large café in Constantinople, and if there be there one hundred mouths (a sailor would say hands) there will as assuredly be one hundred pipes, and one hundred tobacco-bags, and one hundred tiny cups of coffee. There you will see people of every nation and of every tongue, of every dress and every colour smoking, not fitfully and spasmodically, but smoking as if smoking formed the duty of their lives, or was intimately connected with their system of respiration; nay, some old Turks, in order to enjoy a new sensation, and to live in an invisible atmosphere of smoke, have the tympanum of the ear pierced, and thus they can drive the beloved smoke, not only through the mouth and the nose, but also through the ear, and it is even said through the lachrymal passages of the eye as well. If you be a frequenter of this café, you will soon come to recognize every pipe in the place. The proprietor may wear a blue surtout or a brown, his beard may be long or short, he may be in purgatory in his boots, or in paradise in his slippers, but be sure he uses the same pipe. They come in together and go out together, they are the last to part at night, and the first to meet in the morning,

in joy and in sorrow, in feasting or fasting, in work or in idleness, they remain mutual and constant friends. You know a man's character and pretensions by the length or richness of his pipe. A Caidjee contents himself with a thorn stick pipe two feet long, with a wooden bowl, and no mouth-piece; a three-foot pipe, with an attempt at a mouth-piece, indicates an advance in the social position; but a Pacha sports a cherry stick 6 feet long, artistically jointed, mounted with clouded amber, and set with brilliants, with the bowl as large as a coffee-cup, elegantly moulded and richly gilt. Hear this, ye smokers of black cutties! This lordly pipe may cost from £20 to £100; the bag which contains the Lat-akia, is made from the flowered borders of the rich Cashmere, and the pipe, cup, and slipper-bearer, and the Pacha, are all the slaves of this lordly chibouk. The manufacture and sale of all the appliances and means to boot, necessary for smoking, occupy about a third or fourth of all the shops and workmen of Constantinople. There are the "Totoon," or tobacco-shops; the "Timbuckee" shops for "nargille" or water-pipes; shops for the sale, and workshops for the manufacture of the bowls, ditto for the pipe-sticks, ditto for the amber mouth-pieces and their tubes. Then there are manufacturers for the glass, for the brass, and for the leather appliances of the "nargille," for the brushes to clean, and the cakes of perfumed charcoal to light the "nargille"; add to this, manufacturers of coffee-cups, coffee-pots, chibouk stands, makers and sellers of tobacco-bags, &c., and we may well believe that a fourth or fifth of all the industry of Constantinople vanishes directly or indirectly in—smoke."

The practice of smoking is increasing in Great Britain, principally in consequence of the early age at which imitative boys and fast young men of to-day, begin to adopt the legitimate indulgences of their seniors. A young gentleman in his teens would feel ashamed to confess that he had commenced to take his afternoon *siesta*, or that he had his bed regularly warmed, and required a "night cap" before retiring, to ensure him sleep; and well he might, yet by taking pleasure in tobacco, he thereby voluntarily admits, that his young life has commenced to be burdensome to him; that he requires a narcotic to render it passable; and that he is so deficient in energy as to be unable to fulfil the simple duties of his age, without an artificial solace. A smoking youth may perhaps laugh at his younger brother, who, when the string of his kite has become so ravelled that he cannot loosen it, sits down and cries until his mother comes to his relief, yet the hobble-te-hoy smoker acknowledges much greater weakness than his infantile brother, who will probably succeed next time in untwisting the tangled cord, while he clings for succour to a delusive and fascinating tyrant, which can give him no real present aid, nor be of service in sustaining him in the following days occupations. The usual employment of growing young men is neither perplexing nor exhausting, being generally efforts of memory at school or college; routine of a shop or office; or doing what they are told as apprentices. A soothing agent is, therefore, altogether superfluous for them. They ought to be too high-spirited to avow that their own resources are inadequate to give zest to life, and that, consequently, they must have recourse to a powerful

drug like tobacco to afford them extraneous pleasure. The example of frivolous companions, and an arrogant and foolish desire to be taken for men, are two of the chief causes of this unbecoming and pernicious use among the young, of a homely and really excellent remedy—a use which has caused its value to be called in question : some philanthropists having asked whether the world would not have been better if it had never known tobacco; others denying themselves the weed, when it would be beneficial to them, because their sons were learning the habit. Manhood can afford to let “strong minded women” do a little talking, so long as young maidens keep in their place; but it *is* a serious matter when the coming generation of men are beginning to force themselves like hot house plants; to render their minds irresolute, their bodies effeminate and nervous, ere they are yet mature. And when they begin to make their sires forego an indulgence to which age entitles them, it is high time that we try to save from themselves the smoking youth of to-day.

That tobacco is being smoked to a most alarming extent by boys, is only too patent to any one who uses his eyes. The quantities of orris root, mace, cinnamon-bark, mint lozenges, and other aromatics, which chemists daily vend to lads, for the purpose of disguising from their parents the fact of their smoking, tell a woeful tale. I speak of this, that teachers of schools, and fathers of families, may be on the alert to preserve children under their charge, from a practice which must end in their physical, mental, and even moral deterioration—physical, by the impairment of

digestion, growth, and muscular power; mental, because to nicotize the immature brain by tobacco, is as ruinous to its force and activity, as to overwork the childish body is inimical to its development. Its immoral effects are not quite so evident. So far as I am aware, none of the many illustrious smokers of whom I have read, commenced to fume until their frames were set, or late in life; while of those who smoked at school or college, I can say, from my own knowledge, that among a great number of students, of undoubted ability, not one so far has attained distinction. Too early devotion to the weed seems to have weakened their mental powers, and blighted their one-time brilliant prospects. Some of the most promising of them, are now settled down, apparently with no other aim than to fill their pipe and smoke, smoke and fill the pipe again, to the end of the chapter, in some easy-going rural sphere of action. For myself when I sit, down to smoke, I feel that I would rather not be disturbed, nor am I inclined to do anything for some ten minutes after I have done; this is doubtless from want of application, but as yet, I do not care to spend sufficient time to qualify me for the proficiency requisite to be able to smoke and work at the same time.

My own personal experience, and observation among medical students, is supported by the result of examinations for Law and Divinity, smokers having been found behind non-smokers in mental calibre. So long ago as 1606, a medical writer said: "Tobacco is not safe for the young, and should be called 'youth's-bane.'" Dr. Richardson tells us that smoking arrests oxidation,

and consequently is very noxious to young persons causing: "impairment of growth, premature manhood, and physical degradation." Sir Benjamin Brodie, from the result of experiments upon animals, affirms that oil of tobacco acts: "by destroying the functions of the brain." This, of course, refers to its administration as a poison, but who can think with coolness upon our youth, voluntarily sapping the vigour of their brains—the only organ in which we excel the brute creation—and thus wearing out their nervous systems, ere they have fairly entered upon the important duties of life! The late Canon Stowell said that: "Smoking blighted young men. But on growing boys—who should be the objects of parental and national hope—the worst injuries are inflicted. Their growth is arrested—they become pale, gloomy, and indifferent—they lose the power of their will, and are easily decoyed into bad company, and its dangerous tendencies." Mrs. H. Kirk, in a circular from Edinburgh, dated November, 1870, addressed to superintendents and teachers of Sabbath Schools in connection with the Evangelical Union, says: "Boys are peculiarly exposed to this temptation, and may be seen with 'the pipe' in their mouth before they are ten years of age. The formation of such a habit in early life cannot easily be got rid of. Like all other bad habits learned in youth, it proves more powerful in the man. For want of knowing the subtle nature of such a narcotic poison, and how it surely affects their health and strength, boys often in ignorance are drawn into this evil snare." In North America, a country whose inhabitants ought to be well qualified to form an opinion on this subject, the

Methodist Conference, in 1868, amongst other resolutions, passed the following:—"That we request the Presidents and Professors of our Colleges, and the instructors of youth, in the Schools connected with our Church, and all Sunday School superintendents and teachers, to guard the youth under their care from being entangled in this vice." Many observers on the continent have noticed the inferior attainments of students who smoke, *e.g.* M. Bertillon, in 1855, found of the pupils then at the Polytechnic School, Paris, that 102 smoked, and 58 did not smoke. He arranged the 160 in 8 divisions, according to the merit which they evinced at examinations, 20 in each rank, with the following result:—

				Smokers.	Non-smokers.
Of the 20 who stood highest there were			6	14	
"	"	next	"	10	10
"	"	"	"	11	9
"	"	"	"	14	6
"	"	"	"	13	7
"	"	"	"	15	6
"	"	"	"	16	4
"	"	"	"	17	3
				—	—
				102	58

M. Bertillon also discovered that the mean rank of smokers, as compared with non-smokers, deteriorated from their entering to leaving the school. We need scarcely feel surprised at this, for when a tobacco loving student becomes tired of reading, (whether his

brain be jaded or not is a different question,) he has recourse to his pipe for rest and change. If he be a man of 30 or 40 years, he probably could not do better, but when a stripling from the country finds his memory unequal to retain more, he would be much better for a walk instead; for using a pair of dumb-bells; or if he went to bed for the night; he would thereby invigorate his body, experience less nervous exhaustion, and be more capable in his future studies. An author in the *Medical Gazette*, of Lyons, in treating of smoking by the young, says: "Tobacco smoking lowers the intellectual faculties, in a direct manner, by its action on the brain, and, in an indirect way, by predisposing to idleness, and in transforming the natural desire to activity into a desire to remain in a state of *inertia*. In a moral point of view it lessens the worth of the individual, and relaxes the family ties. The habit becomes associated with evil tendencies, and strengthens them."

The British and Foreign Medico Chirurgical Review for January, 1861, in a very fair article, reviewing 13 publications upon tobacco, says: "We see, with satisfaction, that the Minister of Public Instruction [Paris] has further issued a circular, addressed to the directors of colleges and schools throughout the empire, forbidding the use of tobacco and cigars to students, on the asserted ground 'that the physical as well as the intellectual development of many youths has been checked by the immoderate use of tobacco.'" In summing up the reviewer says: "We are glad to think, however, that great as is the disagreement of contending writers, at least on two points they are of one mind, viz.: that in

excess tobacco is hurtful, and that the young ought to be prohibited its use, as a bad habit, whether it stunts growth or not."

In 1868, Dr. Decaesin recorded, in a foreign journal, the result of his investigations, relative to the effects of smoking by boys. He found that 70 per cent. evinced distinct symptoms of nicotine poisoning, such as : palpitation, disorders of digestion, slowness of intellect, taste for strong drinks, deficiency and alteration of red corpuscles in the blood, a palid and waxy face, disturbed sleep, frequently recurring sore mouth, and bleeding from the nose. When a boy has these symptoms, without any apparent cause, especially bleeding from nose or mouth, loss of appetite, and want of pluck, his pockets should be searched for tobacco, for if he smokes, so long as he continues the practice, no medicine will be of any avail. Dr. Decaesin has done the world no little service in publishing the result of his observations upon juvenile smoking, and has materially strengthened the hands of his medical brethren, who are often called upon by anxious parents respecting boys who unaccountably exhibit some of the above signs of physical weakness.

Lord Bacon said : "Tobacco affects men with a kind of secret delight, and no doubt it hath power to lighten the body, and shake off weariness." A definition of its effects I freely grant as admissible to men, but boys in their teens have no need for "secret delight," to lighten their highly elastic bodies, and nothing but evil can accrue from clouding their opening intellect a certain

number of times daily, while its utmost powers are required to gather knowledge, upon which to build up their future position. The mind is nearly twice as long in arriving at maturity as the body, and if the brain be not acted upon by narcotics, or over taxed with thought before the 40th year, it will preserve its endowments unimpaired until the 70th or even 80th year. Let me then conjure the youthful reader to resolve that, by no fault of his own, will he suffer his intellectual faculties to undergo premature declension of vigour. Those who do not exercise self denial will be in imminent danger of inducing: "A shattered nervous system, premature loss of mental vigour, impaired memory, and even mental alienation." I quote from Dr. Forbes Winslow, who refers, of course, to the excessive and immoderate use of tobacco. But let it be remembered that to begin early and indulge immoderately are generally coincident, and that the *Lancet* in its verdict declares smoking in youth to be in itself "excess."

A few other, and to my mind, very powerful arguments against smoking in youth, were recently published, and much quoted, by Mr. Parton, a recalcitrant smoker, who asks the practical and striking question: "does it pay to smoke?" The reply in the negative might serve the indifferently used representative of the anti-tobacco cause, for a leader in the society's journal. Some of the arguments are so much in point that I give them here for the benefit of the young: "Smoking clogs ambition, produces content of mind, (neither of which are to be desired) is opposed to feminine influence, and makes a man bow with

equanimity to much, which he ought in his manhood to resent, or do his best to amend." I cannot do otherwise than agree so far with the writer; it accords with experience. If a young man will continue to smoke after he learns that the practice tends to flitter away his ambition, and, consequently, his prospects, I have no hope of him, and need say no more—his soul is too cold for flame.

Innumerable other quotations might be adduced, to show how pernicious is the use of tobacco in early life. Most of the testimonies are from foreign sources. In one sense, this is a gratifying fact, as it indicates that English youths have not yet abandoned themselves so very much to the noxious habit, otherwise we would have heard more about it from medical men, and a host of other philanthropic censors.

I sincerely hope that this earnest and anxious effort to set forth the evil effects of a common and increasing form of youthful dissipation, will be of some avail in checking hobble-te-hoy smoking. If that objectionable epithet should continue to be applicable after these words of warning, it will only be the would-be-man's own fault. My anxiety for the threatened stature, stamina, soul, spirit, and talent of Britain's youthful sons, must be my excuse for dwelling so long upon juvenile smoking.

CHAPTER V.

The four temperaments we see,
Within the British nation,
For this chapter will furnish me
With text for meditation.

The nervous smoke to ease their head,
Lymphatics for their liver,
The sanguine smoke, they have no dread,
Bilious smoke for fever.

THE pre-ponderance of mind, or of matter in the body, in other words the constitution or temperament, will exercise a marked influence not only in determining the effect of tobacco upon the system, but also the desire for indulgence in it. The fact that the habit is so universal, that mankind may be said to use tobacco, points to the anodyne being most appropriate for that temperament which is possessed of most brain and memory, as furthest removed from the brute creation, viz., the nervous.

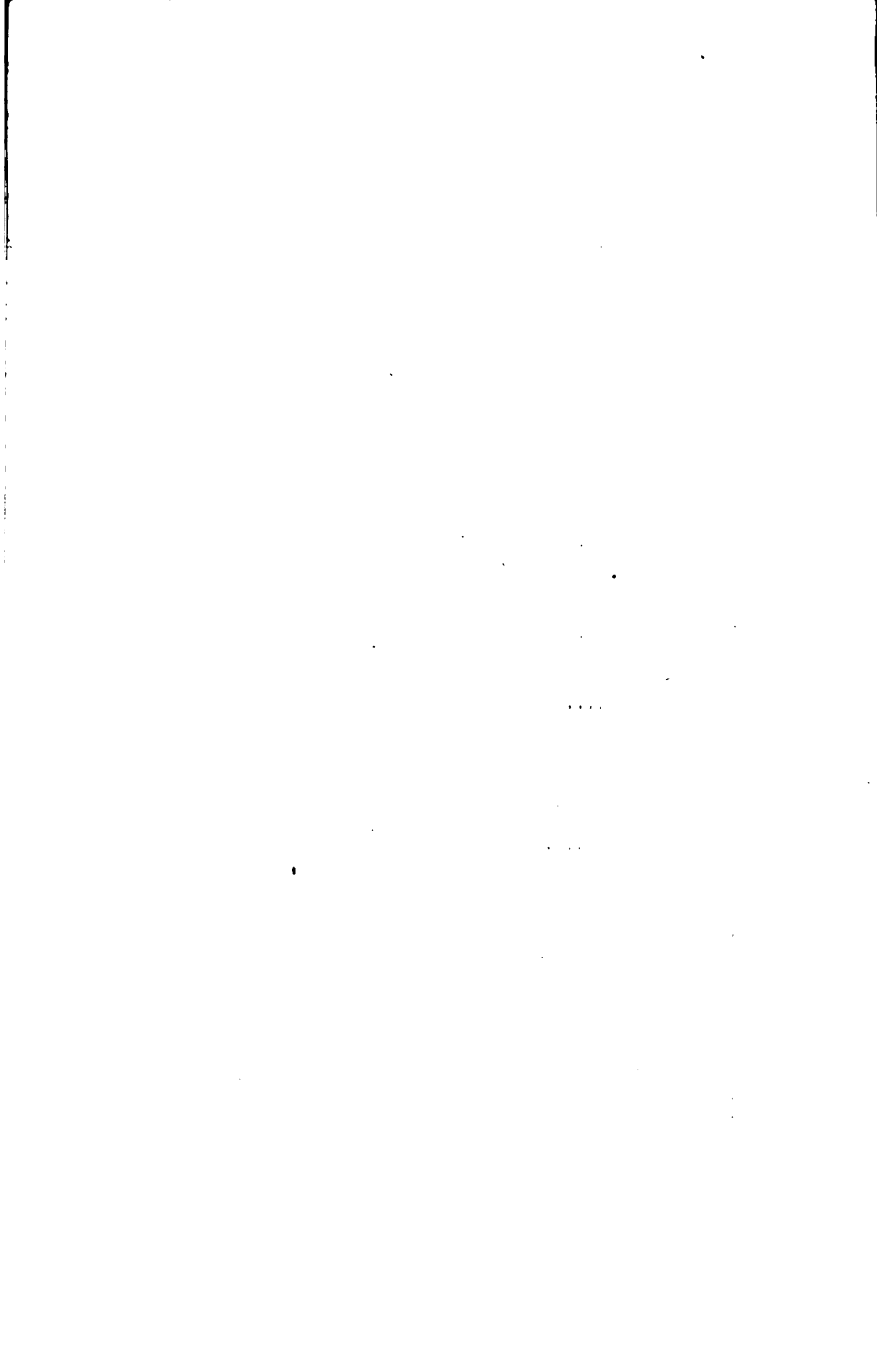
The importance of the temperamental constitution, and its influence for good or evil, on health and habits, are probably insufficiently recognized by the community. In Britain, the following temperaments are well marked, the

NERVOUS,		LYMPHATIC,
BILIOUS,		SANGUINE.

They are distinguishable by a certain form of head, face, and body, different coloured hair, skin, and eye ; besides, a considerable dissimilarity of mind, and constitution of body. Experience has unquestionably proved that the temperaments are not equally liable to disease, nor susceptible to the effects of remedies, especially the stimulant alcohol, and the sedative tobacco.

To aid in awakening increased interest in the physical and mental character, and with a view to assist every man to decide whether tobacco will be injurious or beneficial to his system, I have annexed a table descriptive of the temperaments, abridged and revised from an article of mine in *The Anthropological Review*, for January, 1870, which, after carefully perusing, I hope the reader will have no difficulty in deciding from which of the four he derives his individuality. When the different temperaments are so blended that it is difficult to determine the one a person favours, it will facilitate a solution of the problem, to bear in mind that the nervous is the predominating—the basis temperament in Britain—and that a mixed constitution will be *nervo-lymphatic*, *nervo-sanguine*, or *nervo-bilious*.

SANGUINE.	SANGUINE.
HEAD High from nose to from ear to ear; thin; ears small,	Short and broad; forehead rounded from nose to hair, and from temple to temple.
HAIR Yellow, sometimes light coloured, thin.	Strong, red, or sandy, and curly; beard heavy, red and wavy; cheeks covered with whisker.
FACE Youth, afterward massive, and in- long and fleshy;	Ruddy, freckled, oval, expressive; nose broad; nostrils dilated; chin prominent and strong; thin rich-red lips.
EYES often "wall- eye circle round eyebrows weak	Blue, grey, or red; full, earnest; eyebrows rectilinear, far apart, but near the eyes; often "wall- eyed" after 55.
TEETH good.	Short, broad, yellow, even and good.
NECK and massive.	Short and broad, triangular with shoulders as base.
SHOULDERS broad.	Broad, rather high, well back, and strong; arms long and power- ful.
HANDS heavy; spatulous short, broad, square	Long palms, short strong fingers; skin soft, back downy, with light hair; short bright rose-coloured nails.
STATURE inches.	5 feet 6 to 5 feet 7 inches.
VOICE becoming slow, weak with age.	Sonorous, with a quick, clear decisive intonation.
MIND like, and steady;	Lively, versatile, hopeful, specula- tive.
HEALTH 58, when pulse weak, and fat begins Smoking and be very useful.	Robust until 55, after which liable to suffer from heart and brain diseased, from their rich blood becoming rheumatic; this tend- ency smoking will retard.



The characteristics of each temperament are not so recognisable after 50 years of age—from the hair becoming grey, the eyes lighter in colour, the shoulders round, the person fat or lean—but the long head cannot change into a round one, nor the short person become tall. The mind will remain the same, and the state of health will also aid observation. I would here observe that a temperament, *e.g.* the nervous, will not, under ordinary circumstances, be nervous, in the usual acceptation of that word. It is called *nervous*, because full of nerve—strong. It is only when its powers are too much called upon, that the brain or spinal nerves suffer, and nervous excitement supervenes. Nor is a bilious person the diseased-looking object drawn by Lavater. When in good health it is, in my opinion, the most handsome of the four.

Dr. R. Thorius, a very accurate observer, noted that tobacco agreed with sanguine, but not with bilious men. In this, he was before the writers of his time, who only distinguished between fat and lean persons, permitting the former to smoke, but denying the indulgence to the latter. Dr. Hassall says that, in the sanguine temperament, if not indulged in to excess: "Smoking would be calculated to be productive of beneficial rather than injurious consequences, by lowering somewhat the tone of the circulation, by promoting the secretion of the salivary glands and of the skin, and also by moderating the activity of digestion." Dr. Hassall also approves of smoking for "those of nervous and irritable temperament, especially those who are so from the over-excitement of business, rather than from disease."

According to Mr. Shipman, Surgeon, of Boston, United States, the nervous temperament is most liable to be affected injuriously by tobacco. The bilious and sanguine organisms also afforded him some cases, but he does not give an instance of a lymphatic person coming to him with symptoms which could be ascribed to tobacco. This phenomenon is probably attributable to a rarity of that habit in his neighbourhood.

I am inclined to place the *Bilious* constitution first, with regard to susceptibility to baneful influence, from excess in smoking. This I do from observation, but it may also be inferred from the dry nature of the bilious system, especially the muscular element, and its liability to stomach and liver complaints. These states will also be increased by the habit, most frequent I believe in the bilious, of profusely wasting their saliva, sometimes, even while not smoking. Individuals of this organization, should be careful to smoke temperately, and not spit.

Second, the *Lymphatic* temperament, which is already too relaxed, especially in the muscular and areolar tissues, probably in consequence of an excess of white corpuscles and serum in the blood—these much smoking will increase. Nevertheless, I consider that the moderate use of tobacco and the expectoration which it tends to produce, is likely to prove beneficial to persons of this temperament, particularly if they are beginning to be corpulent. Many lymphatic people seem to live only that they may smoke, and hence are frequently to be seen wearing spectacles, for near-sightedness.

Third, I would rank the *Nervous* man. He most needs the soothing spell. Being favoured—sometimes cursed—with preponderance of brain and feeling which not unfrequently run away with him, he too often abuses it, hence a greater proportion of young nervous people have come under Mr. Shipman and others, for treatment of symptoms attributed to tobacco.

The *Sanguine* rarely require advice. When they do, it is only after an excess, and from their being very emotional. From their capacious lungs and full active circulation, they soon throw off any unpleasant feelings, and never require more than a word of caution.

There is an appreciable amount of individuality about the smoking of each temperament. The nervous person craves for excitement, and puffs his “cutty” lustily for a short time; the bilious smokes more judiciously, taking one pipe only after meals; the sanguine toys with his cigar, and smokes for good-fellowship; while the lymphatic will enjoy his “churchwarden” contemplatively and complacently by the hour.

The long list of symptoms enumerated by anti-tobaccoites, are either from idiosyncrasy or functional derangement, they tend to cure themselves by imposing a limit to the enjoyment—for them, we must not blame the weed. To a harassed adult, tobacco *is* useful; corporeally to the sanguine and lymphatic; mentally to the bilious and nervous—if the latter, however, *will* smoke, snuff, chew, and drink altogether, they deserve to suffer a little for their indiscretion.

As different nationalities smoke for diverse reasons, according as they are affected by location, or influenced by temperamental and racial proclivities, the following observations may perhaps amuse some of my readers :—

The Englishman	smokes	for	<i>Taxation.</i>
„ Scotchman	„	„	<i>Meditation.</i>
„ Irishman	„	„	<i>Parentation.</i>
„ Frenchman	„	„	<i>Dissipation.</i>
„ Spaniard	„	„	<i>Conversation.</i>
„ Portugese	„	„	<i>Pabulation.</i>
„ Italian	„	„	<i>Inspiration.</i>
„ Austrian	„	„	<i>Sedation.</i>
„ Pole	„	„	<i>Desperation.</i>
„ Turk	„	„	<i>Vocation.</i>
„ Greek	„	„	<i>Fascination.</i>
„ Hebrew	„	„	<i>Tribulation.</i>
„ Russian	„	„	<i>Resignation.</i>
„ German	„	„	<i>Mystification.</i>
„ Dane	„	„	<i>Salivation.</i>
„ Dutch	„	„	<i>Phlegmation.</i>
„ Belgian	„	„	<i>Recreation.</i>
„ Swiss	„	„	<i>Expectoration.</i>
„ Icelandier	„	„	<i>Isolation.</i>
„ Swede	„	„	<i>Calorification.</i>
„ African	„	„	<i>Refrigeration.</i>
„ Indian	„	„	<i>Pacification.</i>
„ Yankee	„	to	<i>Whip Creation.</i>
„ Boys	smoke	„	<i>Imitation.</i>
„ Men	„	„	<i>Gratification.</i>
„ Age	„	„	<i>Consolation.</i>
And Ladies	„	for	<i>Medication.</i>

Should any lady do me the honour to read these pages, and experience curiosity to know which temperament she condescends to favour, I may tell her as a secret that the sex are nearly all of them nervous, as their mothers the original inhabitants of Britain were. If ladies have little right to credit for this, inasmuch as it is inherited, it is at least a reason for their being physically, as well as mentally, more conservative than men, and for this they receive our admiration.

With regard to ladies smoking, probably the less I say the better. It would be dangerous ground even for an angel to tread. I think I may state however, that the more woman departs from the nervous type, and evinces lymphatic, sanguine, or bilious characteristics—the nearer she approaches in her configuration to that of man, the nearer will she be to requiring tobacco. This may seem contradictory to my dictum, to the masculine gender, but no!—it only indicates the differentiation of the sexes. A few ladies become “strong-minded,” and after 50, some lose a portion of their fine nervous organization. To many of these, especially such as are of a decidedly bilious temperament, smoking would be useful, and if tried, I think its utility would not be disputed. Indeed, I can certify that I have repeatedly observed much advantage derived from tobacco by ladies of a bilious habit, who soon cease “worriting” about trifles, and assume instead an equanimity of temper, quite charming to the household.

CHAPTER VI.

"If the sum of human happiness is increased by tobacco, and the sum of human life is not diminished by it, the fact that there are men devoid of self-control who abuse a good creature, cannot coerce the many who know how to use it; to use it for the purposes of health and those of enjoyment, to refresh the body and console the mind, to add a charm to solitary study, and a zest to intellectual intercourse. It [tobacco] has saved more lives by preventing inflammations from exposure, than has ever been sacrificed to its excessive use."

DR. J. C. BUCKNILL.

I HAVE read a considerable portion of what has been written upon tobacco—from the medical work of Dr. Monardes in 1574, and the quaint old Counterblast of King James, to the able articles of Dr. B. W. Richardson, and Dr. Blatin's anti-pathic volume, not omitting the Anti-Tobacco Societies' publications and annual reports—and declare that to sit down to the perusal of a tithe of what has been written upon tobacco, unless very tenacious of a pre-conceived opinion, is quite sufficient to distract the reader; for while engaged with certain authors, he may well deem the exotic a panacea

for every ill, and an antidote to every poison. On the other hand, if he examine the works of anti-tobacconists, he may imagine that there is no disease of the present day which has not its fountain and origin in the "hellish fumes" of tobacco, and if it possesses any property of counteracting poison, it is only because it is, itself, the worst poison in "God's creation." It seems to me, however, that the sum of evidence, for and against tobacco, is in nice agreement with Dr. Richardson's admission that it is the least injurious of all our luxuries; that if befittingly enjoyed and not abused, it is often beneficial, and is not more hurtful to the system than beer, wine, spirits, luxurious living, opium, or even tea and coffee. This deduction perfectly accords with my own experience, and may, I think, be safely accepted. Such being the case, as the *British Medical Journal*, of March 12th, 1870, observes: "unless far greater evils can be proved against tobacco than any scientific evidence has yet hinted at, there is probably little reason to expect that the health argument can ever weigh, as a feather, against the attractiveness of the habit."

Much, doubtless, depends upon the attractiveness of smoking, and its being a habit—more still upon the ineffable feeling of satisfaction which pervades the entire system of the smoker. Ladies know and also sometimes take advantage of this happy state. When does a wife or daughter prefer their desire for a new dress or bonnet which they "positively cannot do without"? Not when papa is having dinner or taking tea. No! Intuitively they select the most auspicious moment; when the husband or father is smoking his "churchwarden," or

engaged upon a choice cigar. Then they know that the request will be more than granted, from the ready way in which it is accorded.

To smoke and perpetrate a deed of blood are incompatible, however irate and vengeful a man may be. Let him sit down to smoke, and lo! his passion will evaporate and the calmness of reason take its place. In this respect, tobacco sustains its repute as a sedative, and is contradistinguished to the stimulant alcohol, which too often excites to crime.

Dr. Gray, of Oxford, has recently issued to the world the result of his experience. He gives a number of indications when smoking will be injurious, which may be thus summed up—when “out of health,” or if you are very susceptible to the influence of tobacco, you cannot smoke with impunity. He says: “Against moderate smoking in a healthy person who enjoys it, not a single argument of any weight has been advanced. So much, however, is prated about the evil effects of tobacco, that its virtues rarely get a hearing, and yet the latter are many and great. To quiet nervous unrest; to soothe a ruffled temper; to favour calm and impartial thought; to steady and clear a confused overworked brain; to counteract the effects of physical exhaustion—these are just the things which tobacco does. And if it can effect these ends safely and pleasantly, who shall deny it a place among God’s good gifts to men.”

In the companion essay to this, on “Snuff-Taking, &c.,” I attributed considerable virtue to snuff in preventing epidemic and infecting diseases, and maintained

that tobacco, in bulk, is not so antidotal as when finely comminuted. As far as regards development of ozone, this will hold, for increased surface must give increased power, but tobacco smoke, although it does not produce ozone, is, I am convinced from observation of self and others, strongly disinfectant. A belief established by the Great Plague, and which has obtained during the more than two centuries which have since elapsed, cannot but be well founded on truth. Recently, when in the company of a number of thinking men, the subject of smoking was introduced, and its merits discussed. A physician present stated his conviction that the smoke of tobacco is very valuable as a disinfectant. He had been actively engaged in every epidemic of small-pox, fever, and cholera, since 1825, his observations dating from the first cholera epidemic. He had himself depended on smoking, and had recommended it to his friends. He related some interesting incidents in point, which my space does not serve to reproduce.

During the early part of the present epidemic of small pox, when seeing a confluent case, a lady, only once protected by vaccination, entered the sick-room, puffing a cigar. Upon my remarking it, she eloquently pointed to the patient. I immediately bent to her as a master. I have myself seen, and also been informed, that many ladies, during the current visitation of small-pox, have given pronounced evidence of their faith in the antiseptic virtues of tobacco, by selecting the smoking compartment when travelling by rail, and not a few, while waiting upon their relatives, have, even in severe cases, trusted to tobacco and snuff as safeguards.

I am happy to add that, so far, they have rejoiced in an immunity from the most contagious disease, with which the present age is acquainted.

In this era of *anti's*, and unbelief, it is impossible nicely to demonstrate how much the sceptical may be indebted to the orthodox, for exemption from infective diseases. So long as a few persons of doubtful sanity will in this, the country of Jenner, deny their children the defence of vaccination, it is only right that they be well fined or taxed, in return for the security which the vaccinated around them confers. In the case of anti-tobacconists, the benefits of fumigation being spontaneously afforded, like air and water, they are not valued, although you may occasionally observe a non-smoker walking behind a gentleman who is enjoying a fine flavoured cigar, evidently taking pleasure in its perfume.

Of consumption, another disease which is hereditary, inducible, and also capable of being communicated, Dr. Maurice Ruef, of Strasburg, in 1836, wrote:—"Pulmonary consumption is rare among workmen, who are engaged from their youth in the manipulation of tobacco; moreover, this disease makes much less rapid progress than it does usually in those who may happen to have the germ of it already developed, when they enter the workshop." In a more recent communication, he adds that "extended experience has amply confirmed the accuracy of this statement." The editor of the *Medico-Chirurgical Review*, says of the above:—"The hint is a good one: the soothing effects of tobacco smoking, where it does agree, may be really very use-

ful in cases of incipient or threatened phthisis." Dr. Richardson, Physician to the Royal Infirmary for Diseases of the Chest, in a pamphlet in 1865, gave statistics of cases of consumption, chronic bronchitis, and asthma, amongst smokers and non-smokers. He said he felt confident that none of these could be primarily induced by smoking.

Now that cholera is so near, and so likely to revisit our shores that Government deems it necessary to adopt preventative measures, I claim some attention to this paragraph, lest we should unfortunately have the opportunity of putting to test, the antidotal properties of tobacco. Should we be again invaded, I think it well to remind my readers, that the aroma of tobacco is useful in preserving from cholera, and that after seizure, tobacco infusion has been said to be the best cure. The late Dr. John Baird, of Newcastle-upon-Tyne, in 1832, wrote a pamphlet recommending tobacco enemata, made from the unmanufactured leaf, in the treatment of Asiatic cholera. Upon referring to the medical journals of that day, I observe that this mode was looked upon with suspicion by the profession. This might have been, from their deeming it more likely to cause collapse than to cure it, or perhaps the result of revulsion, the age for believing tobacco a useful medicine, having past, the general opinion tending to the other extreme, until they could see nothing in it but a source of dissipation. I was, however, informed by my friend, the late Henry Harvey, Esq., Surgeon, that both in Dr. Baird's practice, and in the two succeeding cholera epidemics, he had often seen cases of collapse in "the blue cold

stage" recover under this treatment, with the particulars of which he very kindly furnished me. He likewise stated that a medical officer, who came down from London, to inspect and report upon the different modes of treating the epidemic in the North, was inclined to attribute recovery to the warmth of the fluid introduced rather than to the tobacco, until to satisfy him, Mr. Harvey administered the infusion cold, with the same gratifying issue. But more remarkable still, during a long official connection, embracing the three invasions of cholera, with one of the largest tobacco manufactory in the North, Mr. Harvey could say that none of the employees had cholera, although many of them lived in the slums of Newcastle and Gateshead. A manufacturer and wholesale tobacconist, who had heard of Dr. Baird's treatise, and the immunity from cholera enjoyed by workmen amongst tobacco, extended his observations to dealers in the weed, and, as far as my informant's experience went, they were also exempt from the scourge. I feel satisfied, therefore, that tobacco has been instrumental in preserving us from the plague, and, also, in helping to suppress other contagious diseases.

Of the anaphrodisiac properties of tobacco, and its power of inducing sleep, Dr. Thorius playfully wrote :—

* * * * The gods *Bacchus, Liber,*
Jove, Mars, Vulcan, Mercury, Apollo,
 Lustily through their nose the smoke did take,
 As if another *Ætna* they would make.
 The *goddesses* pleas'd with the novelty,
 Laugh't all the while, but they when they did see
 How much to *sleep* that night the *gods* were given,
 Angry, decreed it should be *banished* heaven."

This property of tobacco as observed by Dr. Thorius, in 1625, seems to me to have more or less effect according to the race and temperament of the smoker. It may be, and I believe is, true of the French, a nervous race, but is open to question with regard to the Germans, who as a people are lymphatic. In the present century we find the hint repeated by Lord Byron, who says of the Turk that "Divine tobacco rivals opium and his brides," and I think that, although, we may not, in England, pride ourselves upon our morality, tobacco has, nevertheless, been useful in preventing those so inclined from running into evil courses. Thus I have known it recommended to the incontinent. I would only be looking at one side of the question, however, did I not add that its use is also conducive to celibacy, and that Byron might have ranked tobacco as a rival to the sex in other countries besides Turkey.

If it were true, as moral essayists would have us believe, that tobacco is the great enemy of our race, we should expect a few well-established facts to be forthcoming to prove, beyond question, to all tobaccoites, that they are on the wrong side of the pale. But we read in *The British Medical Journal* that: "The weight of evidence is in favour of a general physical improvement of race-characters throughout the civilized world. This is abundantly proved by the most reliable vital statistics. We are progressing, and not retrograding." Men are not only advancing in civilization and mental culture, but also improving in stature and longevity. Upon the subject of the physical degeneration of mankind, the *Spectator* recently contained a relevant

article, in which it stated that one-half of the members of the House of Commons could not get into the armour of our ancient knights, and that an Englishman of the present day, whether he be a London costermonger, an athlete, or a navvy, would be quite equal to strangle, to outrun, or to smash the most perfect living savage, or the representative of any previously existing race.

1,000,000,000 men and 300 years are neither few nor short, yet these number of smokers, during that period, have failed to produce tobaccoic disease, unlike alcohol, which will induce drunkard's liver, or good living gout. After three centuries of observation, by friend and foe, hear Sir Robert Christison, Bart., an authority upon poisons: "No well-ascertained ill effects have been shown to result from the habitual practice of smoking." Insanity, epilepsy, apoplexy, heart-disease, paralysis, St. Vitus's dance, consumption, cancer, &c., have been attributed to the poisonous effects of tobacco, but without sufficient evidence; indeed, it is rather the other way. Dr. Bucknill, Chancery Visitor of Lunatics, in a letter to *The Lancet*, said:—"The use of tobacco has certainly no influence in the production of insanity. It is more likely to prevent it, by blunting the keen edge of bodily distress and mental grief. I have had some experience in this department of medicine, and I never knew a case in which the use, or even abuse, of tobacco has appeared to assist in the production of insanity." After examining the causation of more than 20,000 cases of insanity, he only found one—a quaker in America—in which the cause had been referred to tobacco. He also adds that Dr. Conolly recommends

the insane tobacco to procure sleep. It is a well-known fact that more cases of insanity and of cancer occur among women than men. With regard to the frequency of paralysis in the present day, if our theorists were to remember that we live in an age of steam as well as tobacco, they would probably discover the best solution of the cause. Alcohol might be named, but it is only recently that paralysis has become so frequent, and railroad travelling is a more novel institution than either drinking or smoking. As a set-off against any functional derangements, which tobacco may incite, I think it serviceable in preventing cold, rheumatism, gout, sciatica, tic, ague, some forms of indigestion, and as a useful aperient to the sedentary. It also tends to preserve the nervous man from gravel and paralysis—the bilious, from typhus, gastric fever, and suicide—the sanguine, from rheumatic fever, inflammation, and heart-disease—and the lymphatic, from asthma and apoplexy. * Advisedly, therefore, I consider tobacco, *when judiciously and temperately used*, to be a great boon to the human race—that in the past it has been instrumental in raising the standard of longevity—that for the present time it is a requisite—that for the future as we can fight and suffer, think and work, better now than in any preceding age, we need be under no alarm.

Sir Duncan Gibb, in a paper contributed to the British Association Meeting, 1871, stated as a fact that all centenarians he had known carefully avoided snuff

: * For rationale see table and chapter on Temperaments.

and tobacco. I am glad, the fact being questioned, that such an eminent authority admits that there are centenarians. My experience—and I have personally known a few, is that to snuff or smoke is the rule with them. Joshua Millar, aged 110, now, alas, in the Morpeth Workhouse, spent of every shilling, I or anyone gave him, 8d. for rum and 4d. for tobacco. If “Smoking” should see another edition, and there be a page or two to spare, I will be happy to fill them with the names of centenarians, whose chief and almost only comfort has been their tobacco.

One pipe at a time is quite sufficient as a sedative; a second will induce nicotism, more or less marked according to the temperament; a third, or unlimited number, must be injurious to most men. If smokers would remember this, be discreet in their indulgence, and attend to the following advice, they might enjoy their pipe with all its concomitant benefits, and with a minimum of injurious consequences:—Abstain until 30; refrain from spitting; eschew wood, porcelain, and all seasoned pipes, indeed, any kind except those of porous clay, the hookah or meerschaum—throw out the “dottle,” instead of preserving it to colour the latter, or to place upon the top of the next filling—avoid smoking on an empty stomach, as a portion of gastric juice is secreted simultaneously with the flow of saliva into the mouth, and hence wasted—smoke slowly, and, if possible, only in the open air, or in a well ventilated room—select the light coloured, and driest kinds of tobacco—be careful to smoke only the mildest cigars, which should never be licked over before use, as so doing fixes a portion of the nicotine,

which is thereby drawn into the mouth—never bite off the end, but pierce it through a quarter of an inch from the twist, with a large pin or a penknife, or, better still, leave the nose whole, for the cover being porous, a good draught is obtained from a cigar worth smoking, after 2 or 3 hearty pulls—throw away the end, ere it becomes hot; and drink no beer, wine, or spirits, after a smoke, as they are solvents of nicotine, and wash it into the stomach. If the mouth be parched in the morning or after smoking, it might be gargled with water, or dilute Condyl's Fluid.

It is futile to treat of antidotes to nicotine, such as tannic or citric acid, lemon and lime juice; digesting tobacco in spirits, in an alkaline, or other solution; or of substitutes for the weed, as lettuce, coltsfoot, water-cresses, &c. A smoker might, for a few times, "blow a cloud" from habit, or for the sake of companionship, but he would assuredly soon give it up as childish. What does any one smoke for, if not to feel the effects of the nicotine, more or less—even the fragrant acrimony of the tobacco-camphor, apart from nicotine would, like the continued redolence of the rose, cease in time to charm. According to the suggestive statement of Dr. Rush, of Philadelphia, when writing upon tobacco, tea, coffee, &c., "they seem to be happily suited to the change which has taken place in the human body, by sedentary habits, requiring less nourishment and more stimulation."

Viewing the practice of smoking in the same light as Drs. Rush, Richardson, Carpenter, and others, I think

no harm can accrue from any small quantity of the oil, nicotine, or resinous extract, which may chance to be absorbed by the buccal mucous membrane of a cleanly smoker, who has attained his 30th year, for they are soon excreted again. The empyreumatic vapour and oil, though associated with a trace of hydrocyanic acid, would be also innocuous, but in conjunction with the ammonia, carbonic acid, and carbon, so much salivation is induced as will, in course of time, impair the digestion of thin bilious dyspeptics, who take too little air and exercise, and who spit much while smoking. An old hand assures me that, if the spittoon be kept out of sight, and the first flow of saliva swallowed, you will soon get over the habit of spitting while smoking. Some authorities have recommended the smoker to expectorate, to prevent the nicotine being absorbed into his system, but I would not defraud him of the small portion which may distil from one pipe, lest, from lack of satisfaction, he should proceed to more.

In an article on the "Social Uses of Tobacco," *Cope's Tobacco Plant*, for June, 1871, says, "If it has become a habit to smoke—a habit not only of a nation but of the world; not only of a period but of an age—it denotes a physical condition of mankind to which smoking has a definite suitability. The condition of society may change, the habits of civilization may be reversed, a new species of social life may arise; then the herb which solaces now, may be no longer needed, or may be superseded by new discoveries. In the meantime, we have to consider human nature and its necessities as we find them."

THE QUID.

More nicotine is absorbed into the system by chewing than smoking, or snuff-taking. Those who have seen much of the practice, testify that it injures the gums, softens the teeth, renders the breath very offensive, and that all the evils which have been arrayed against tobacco, are exaggerated when the quid is used, the more especially as it can be renewed without cessation, in circumstances where the pipe or cigar are inadmissible. Quid-chewing causes a greater flow of saliva than smoking, and, hence, must interfere with digestion, in a still greater degree.

In Newcastle we have a few old quidists who *digest* tobacco, having evidently no idiosyncrasy anent nicotine, for they can chew from half-an-ounce to an ounce of the strongest American per diem, swallow all the juice, eat their meals with the quid in their cheek, and do not even remove it during sleep. Dr. Arrott, in *The Lancet*, for April 25th, 1857, told, as a marvel, of a harbour-master at Arbroath, "who ate four ounces of the strongest negro-head tobacco, every five days," and more if he could get it without expense. He swallowed the whole result of mastication, both leaf and juice, thereby taking into his stomach 5 or 6 grains of nicotine daily, yet he not only lived, but enjoyed good health. Dr. Arrott's case has brought to light many similar. Verily, "one man's meat is another man's poison." Use, exercise, and fresh air produces a tolerance of the strongest tobacco. The more experience we acquire of

man and his habits, the more forbearing we ought also to become; for observation demonstrates that what we read of the evil effects of tobacco, is in some cases, no exaggeration, while, to other persons of different constitutions and surroundings, the herb becomes a "balm of Gilead." Imagine this "beggar'd sailor" the worse for his quid.

"He seized the quid,—'twas hard and dry,
The last one in its nook;
The beggar'd sailor heav'd a sigh—
Despair was in his look.
And have I fought and bled in vain,
Are all my comforts o'er—
When shall I see thy like again,
Thou last one of my store."

I must now claim the reader's kind indulgence, and express the hope that he will not experience much surprise upon finding that so large a portion of this brochure is rather an introduction—not even an exhaustive one—than an evolution of the very important subject. The fact is, a booklet upon tobacco, is but a cigarette, a mere whiff. It takes the same care to kindle, and the end in both comes so soon; too soon to give the writer scope; too soon to afford a hearty smoke. However, what I have omitted in thy praise, "divine tobacco," has, oft already been eloquently rendered, and is hourly much more effectively presented in the homage accorded thee by the incense-breathing lips of more than 200,000,000 of earth's grateful sons and daughters.

Just Published—2nd Thousand.

SMOKING : WHEN INJURIOUS, WHEN INNOCUOUS, WHEN BENEFICIAL, with Compendium of the Temperaments, shewing how they are influenced by the use of Tobacco. By John C. Murray, M.D., F.A.I., Newcastle-upon-Tyne. Crown Octavo—72 Pages—Price One Shilling. London: Simpkin, Marshall & Co. Newcastle-upon-Tyne: D. H. Wilson; and all Booksellers.

"In these two most interesting and ably written pamphlets, Dr. Murray gives an exhaustive summary of the history and use of tobacco, from its first introduction into Europe down to the present time: and regards its wide-spread adoption and influence in all parts of the world, civilized and uncivilized, with the eye of a philosopher, as well as a physician. It is as a pleasurable and gentle sedative, in most cases, and with proper regard to individual temperaments, that our author views the practice of smoking; and some of the hints he gives in regard to the choice of tobaccos and cigars, the best kinds of pipes to smoke, and the right times for smoking, we consider very valuable. Snuff-taking, Dr. Murray, thinks, should be ranked under a different category, viz., as a mild stimulant to the nerves and brain; and, moreover, he claims for it in this form virtues, as a prophylactic agent, which certainly demand attention, especially as the maladies against which he deems it a preventative, are not only at the present time widely prevalent, but we fear are also lamentably on the increase. From a long-extended series of observations, embracing many years, Dr. Murray thinks that snuff-taking is not only very useful in warding off small-pox and other infectious diseases, but he is of opinion that it is also very beneficial in preventing, if not actually curing in the earlier stages, consumption, bronchitis, catarrh, &c. Dr. Murray's works are written in a very pleasant and genial style, characterised by much humour and quaintness of illustration; they abound in entertaining anecdotes of past and present times, and there is not a dull or heavy chapter from beginning to end. We commend them heartily to the attentive perusal of all our readers, whether or not lovers of 'the weed' in any of its varied forms of indulgence."—*Institute and Lecturers' Gazette*, July 1st, 1871.

"It has seldom been our good fortune to meet with so much useful knowledge; so careful a gleaning from one of the pleasantest by-paths of English literature; so many quaint autobiographic traits, so much sound sense as regards the laws of health, imparted in language devoid of professional pedantry, as is to be found in the pages of this agreeable little work. There is an odour of good tobacco about the book, most pleasing and refreshing to the votaries of the 'devilish plant.' One can imagine whilst reading it that he is sitting in the author's library, 'mit goot cigars in lofely rows'

gossiping about the weed, every fact and opinion advanced being confirmed by reference to a volume of some favourite author, until the tables, chairs, and floor are literally strewn with books; and you wonder, not that so many have sung the praises of tobacco, but who are they that have written against it! We hope soon to have the pleasure of again seeing Dr. Murray in print."—*Cope's Tobacco Plant*, July, 1871.

"Although the author of this pleasantly-written treatise modestly calls his work 'a booklet on tobacco,' yet it will be found, upon perusal, to contain a large amount of valuable information within comparatively moderate compass. Our author is a decided believer in the consoling virtues of 'the weed of strange power.' Nevertheless, his advocacy of its virtues is conducted with discrimination; his zeal not without knowledge. Juvenile smoking, so much on the increase amongst us, meets with his emphatic disapproval. Every smoker (their name is Legion) will thank the author for this very attractive and readable treatise on a topic of general interest. The devotees of the pipe should not fail to obtain Dr. Murray's capital book."—*North of England Advertiser*, July 1st, 1871.

"This is the thousand and first attempt to settle a question which has reason on both sides, but which has been argued out with perhaps, as little regard to practical investigation, as any of the ordinary subjects of young men's discussion classes. Dr. Murray's book is a gaily written *rechauffe* of the medical, scientific, and literary aspects of smoking, and as such, it affords an hour or two's interesting and profitable study for smokers. About a year ago Dr. Murray wrote a little work of similar appearance on snuff-taking, in which he highly exalted the virtues and glorious effects of that intelligent but partially obsolete custom. This we now recognise as only the first development of the doctor's plan."—*Chemist and Druggist*, July 16, 1871

"The advantages and disadvantages of smoking tobacco have been so often discussed that it is some satisfaction to obtain the evidence of an impartial testimony on this matter. Dr. Murray's book on the subject seems to say that the truth lies midway between the two extremes. He limits smoking to certain periods of life, deprecates it in youth, and gives some sound advice on the subject. The book is interesting, as well as useful, and is calculated to set right many erroneous notions."—*Weekly Times*, July 23rd, 1871.

"Those who have read the little book on 'Snuff-taking,' published not many months ago, by Dr. John C. Murray, of this town, will be glad to learn that he has followed it up with a similar treatise on 'Smoking.' Dr. Murray is such a capital companion, such a genial author, that the many who have previously enjoyed a friendly 'pinch' with him, will hail with pleasure the opportunity now offered of also smoking a 'pipe of peace' in his society. Our author has the happy knack of treating his subject in a pleasing, humorous, yet instructive way. We should never wish to have a

more excellent guide than Dr. Murray to all the dangers and pleasures either of snuffing or smoking."—*Newcastle Courant*, July 28th, 1871.

"Dr. Murray has devoted much attention to the subject, and the whole question is discussed with much ability and practical application, alike in the interests of health and comfort. This treatise is deserving of a very careful and considerate perusal, and, while cordially admitting of indulgence in the use of the 'grateful weed,' in certain cases which he describes, it is not less fitted to prove a corrective to its abuse."—*Berwick Warder*, August 1st, 1871.

"During the last 300 years, tobacco in its various forms has been the theme of an amazing amount of excellent literature, and one might think that the subject would now be exhausted. Not so, however, as we see on reading 'Smoking, &c.' The style and language are good, the arguments cogent and appropriate, and interspersed throughout the pages are many excellent medical hints, *e.g.*, in the chapter upon digestion, against spitting while smoking, also many practical suggestions as to the choice of tobacco, the manner of and place for smoking, the temperaments most suited to tobacco, &c. We are honest in recommending it to our readers, feeling that those who expend a shilling upon it will not be disappointed."—*Birmingham Morning News*, August 4th, 1871.

"This brochure deals, perhaps, a little grandiloquently but soundly with a question of no little importance, and those who read it will find ample information as to when smoking is injurious or otherwise. There can be no doubt that smoking at an age so early as it is now indulged in in this country is eminently prejudicial, and on this point Dr. Murray dwells with particular emphasis."—*Inverness Courier*, August 17th, 1871.

"Dr. Murray deals with the subject upon which he treats with a great deal of impartiality and fairness, and many persons, both smokers and non-smokers, may derive useful information by a perusal of this work. The TABLE OF TEMPERAMENTS is a noticeable feature, and the chapter upon the digestive organs alone, is well worth the shilling charged for the book. We have neither time nor space at our command to give this interesting little volume a more extended notice, but we cannot refrain from quoting for the benefit of our youthful readers, some of the doctor's remarks upon smoking by the young."—*Hairdressers' Chronicle*, September 2nd, 1871.

"A highly interesting examination of an important social question, by John C. Murray, M.D. The author states his case without prejudice, and though strongly in favour of the 'sublime weed', does not forget the other side of the question. Members of the Anti-Tobacco Society, and their friends, will find some terribly hard nuts to crack in this pleasant and chatty brochure."—*Public Opinion*, September 9th, 1871.

BY THE SAME AUTHOR.

SNUFF-TAKING: ITS UTILITY IN PREVENTING BRONCHITIS, CONSUMPTION, ETC. London: J. & A. Churchill. Newcastle-upon-Tyne: D. H. Wilson. Price One Shilling. 2nd Thousand.

"The author combats, with much ingenuity, and by reference to numerous authorities, the objections against snuff-taking. Dr. Murray's little work is most entertaining and instructive. It is entitled, whether with respect to its learning, or its style, to be placed in the same category as Wadd's 'Comments on Corpulence,' or Mackintosh's 'Philosophy of Drunkenness'—no small praise but well deserved."—*Medical Times and Gazette*, September 17th, 1870.

"We should not have thought that so much good could have been said of the practice [snuff-taking] as the author has got together, in the most pleasantly written pamphlet. The little brochure is well worth reading. Dr. Murray gives some scientific grounds for his theory."—*Chemist and Druggist*, Sept. 15th, 1870.

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